

Ravenna and the Traditions of Late Antique and Early Byzantine Craftsmanship

Millennium-Studien

zu Kultur und Geschichte
des ersten Jahrtausends n. Chr.

Millennium Studies

in the culture and history
of the first millennium C.E.

Herausgegeben von / Edited by
Wolfram Brandes, Alexander Demandt,
Peter von Möllendorff, Dennis Pausch,
Rene Pfeilschifter, Karla Pollmann

Volume 85

Ravenna and the Traditions of Late Antique and Early Byzantine Craftsmanship

Labour, Culture, and the Economy

Edited by
Salvatore Cosentino

DE GRUYTER

Diese Publikation wurde im Rahmen des Fördervorhabens 16TOA021 – *Reihentransformation für die Altertumswissenschaften („Millennium-Studien“)* mit Mitteln des Bundesministeriums für Bildung und Forschung im Open Access bereitgestellt. Das Fördervorhaben wird in Kooperation mit dem DFG-geförderten *Fachinformationsdienst Altertumswissenschaften – Propylaeum* an der Bayerischen Staatsbibliothek durchgeführt.



Dieses Werk ist lizenziert unter der Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International Lizenz. Weitere Informationen finden Sie unter <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

Die Bedingungen der Creative-Commons-Lizenz gelten nur für Originalmaterial. Die Wiederverwendung von Material aus anderen Quellen (gekennzeichnet mit Quellenangabe) wie z.B. Schaubilder, Abbildungen, Fotos und Textauszüge erfordert ggf. weitere Nutzungsgenehmigungen durch den jeweiligen Rechteinhaber.

ISBN 978-3-11-068432-2

e-ISBN (PDF) 978-3-11-068434-6

e-ISBN (EPUB) 978-3-11-068443-8

ISSN 1862-1139

Library of Congress Control Number: 2020935594

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <http://dnb.dnb.de>.

© 2020 Walter de Gruyter GmbH, Berlin/Boston

Typesetting: Integra Software Services Pvt. Ltd.

Printing and binding: CPI books GmbH, Leck

www.degruyter.com

Contents

List of Contributors — VII

Abbreviations — IX

Salvatore Cosentino

Introduction — 1

Paul Arthur

1 The Changing Geography of Artefact Production in the Late Antique and Early Byzantine Mediterranean — 5

Glenn Peers

2 Late Antique Making and Wonder — 33

Salvatore Cosentino

3 The Structural Features of Ravenna's Socioeconomic History in Late Antiquity — 59

Isabella Baldini

4 The Toilsome Journey of Marbles and Stones — 83

Maria Cristina Carile

5 Ivory Production: Commerce, Culture and Power — 115

Enrico Cirelli

6 Bricks for Ravenna: Materials and the Construction of a Late Antique Imperial Residence — 153

Deborah M. Deliyannis

7 The Social Sphere of Writing: Manuscripts, Inscriptions and Papyri — 195

Debora Ferreri

8 Grave Goods and Burial Typologies: Funerary Customs in Ravenna — 211

Chiara Guarnieri

9 Ravenna, Classe and its Surroundings: Pottery as a Mirror of Everyday Life — 259

Vivien Prigent

10 Notes on the Production and Circulation of the Byzantine Ravennate Coinage — 293

John Haldon

11 Concluding Remarks. One — 311

Judith Herrin

12 Concluding Remarks. Two — 317

Index — 325

List of Contributors

Paul Arthur

Professor of Christian and Medieval
Archaeology
Università del Salento
paul.arthur@unisalento.it

Isabella Baldini

Professor of Christian and Medieval
Archaeology
Alma Mater Studiorum – Università di
Bologna
isabella.baldini@unibo.it

Maria Cristina Carile

Associate Professor of Medieval Art
Alma Mater Studiorum – Università di
Bologna
mariacristina.carile@unibo.it

Enrico Cirelli

Alexander von Humboldt Researcher at
Ludwig Maximilians Universität
Institut für Vor- und Frühgeschichte und
Provinzialrömische Archäologie
Junior Researcher of Christian and Medieval
Archaeology
Alma Mater Studiorum – Università di
Bologna
enrico.cirelli2@unibo.it

Salvatore Cosentino

Professor of Byzantine Civilization
Alma Mater Studiorum – Università di
Bologna
salvatore.cosentino@unibo.it

Deborah M. Deliyannis

Professor of History
Indiana University, Bloomington
ddeliyan@indiana.edu

Debora Ferreri

Adjunct Professor
Alma Mater Studiorum – Università di
Bologna
debora.ferreri2@unibo.it

Chiara Guarnieri

Archaeologist Officer
Soprintendenza Archeologia, Belle Arti e
Paesaggio per la città metropolitana di
Bologna e le province di Modena, Reggio
Emilia e Ferrara.
chiara.guarnieri@beniculturali.it

John Haldon

Professor of Byzantine History and Hellenic
Studies (emeritus)
Princeton University
jhaldon@princeton.edu

Judith Herrin

Professor Emerita King's College
London
judithherrin01@gmail.com

Glenn Peers

Professor of Medieval Art
Syracuse University
gapeers@syr.edu

Vivien Prigent

CNRS, chargé de recherche
UMR 8167, Orient et Méditerranée
graoute@hotmail.com

Abbreviations

CARB	<i>Corsi di Cultura sull'Arte Ravennate e Bizantina</i> . Ravenna 1955.
CIL	<i>Corpus inscriptionum Latinarum</i> . Berolini 1863.
CHLA	<i>Chartae Latinae antiquiores</i> , XXIX (= Italy, I). Dietikon – Zürich 1982.
CJ	<i>Corpus iuris civilis</i> , II, <i>Codex Iustinianus</i> , recensuit P. Krüger. Dublin – Zürich 1970 ¹⁵ (editio stereotypa).
CTh	<i>Theodosiani libri XVI cum constitutionibus Sirmondianis et leges novellae ad Theodosianum pertinentes</i> , ediderunt Th. Mommsen et P. M. Meyer. Berolini 1905.
LPRa	Agnelli Ravennatis <i>Liber Pontificalis Ecclesiae Ravennatis</i> , cura et studio Deborah Mauskopf Deliyannis (Corpus Christianorum, Continuatio Mediaevalis, 199), Turnhout 2006; other editions by Alessandro Testi Rasponi, <i>Rerum Italicarum Scriptores</i> II/2, Bologna 1924 (until ch. 104); and by Oswald Holder Egger, in <i>MGH, SS Lang. et Ital.</i> , Hannoverae 1878, pp. 275–391.
MGH	<i>Monumenta Germaniae Historica</i> . Hannoverae 1826– (AA = <i>Auctores Antiquissimi</i> ; Epp. = <i>Epistulae</i> ; SS = <i>Scriptores</i> ; SS Mer. = <i>Scriptores rerum Merowingicarum</i> ; SS Lang. et Ital. = <i>Scriptores rerum Langobardicarum et Italicarum saec. VI–XI</i>).
PIB	S. Cosentino, <i>Prosopografia dell'Italia bizantina</i> , I-II. Bologna 1996–2000.
PLRE	<i>The Prosopography of the Later Roman Empire</i> , edited by J. R. Martindale. III/A-B, Cambridge 1992.
Variae	Cassiodori <i>Variae</i> , edidit Th. Mommsen, in <i>MGH, AA</i> , XII, Berolini 1894, pp. 3–385.

Salvatore Cosentino

Introduction

Most of the contributions in this volume were presented in a workshop held in New York in March 2013. Other contributions have since been added to this initial nucleus, which have considerably enriched the original project. In some ways, the present volume stands in an intellectual dialogue with another book recently published on the history of Ravenna, that edited by Judith Herrin and Jinty Nelson.¹ The interplay between the present publication and the London volume lies not only in the fact that some authors participated in both projects, but above all in their shared purpose: to address the history of Ravenna from Late Antiquity to the early Middle Ages from both an international and interdisciplinary perspective. In the last twenty years, scholarship on late antique and early medieval Ravenna has resulted in remarkable publications mainly focused on the fields of architecture, mosaics and archaeology.² While the *fil rouge* of the London workshop was the topic of change and the transformation of the city, that of the present volume is focused on labour – both manual and intellectual – as well as the structure of production and objects derived from manufacturing activities. Although some of the single aspects dealt with here cannot be considered as original, the book as a whole nevertheless offers an approach to the history of Ravenna which is not very common in the extant scholarship. For reasons not depending on the present writer, it was not possible to include chapters on mosaics and metals. However, if one considers that the former has already been thoroughly investigated by scholars and the production of the latter was very limited within the late antique city, it can be claimed that the present publication does indeed present aspects of originality within the rich Ravennate historiography.

The structure of the volume is basically divided in two parts. Three contributions deal with issues of ‘framing’ that concern the changing geography of artifact production in the late antique Mediterranean (Paul Arthur), the perception and meaning of late antique manufacturing making (Glenn Peers), as well as the features of the socio-economic history of Ravenna during the period under scrutiny (Salvatore Cosentino).

¹ Herrin/Nelson 2017.

² I limit myself to the quotation of monographs and edited books (in chronological order): Manzelli 2000; Mauro 2001; Vespignani 2001; Russo 2003; Montevecchi 2004; Penni Iacco 2004; *Ravenna da capitale imperiale a capitale esarcale* 2005; Mauro 2005; Tagliaferri 2005; Augenti 2006; Augenti/Bertelli 2006; Pasi 2006; Ranieri 2006; Augenti, Bertelli 2007; Spadoni, Kniffitz 2007; Barsanti/Paribeni/Pedone 2008; Cirelli 2008; Kniffitz 2009; Vernia 2009; Mauskopf Deliyannis 2010; Augenti 2011; Baldini 2011; Rizzardi 2011; Penni 2011; Verhoeven 2011; Augenti/Ficara/Ravaioli 2012; David 2013; Jäggi 2013; Sotira 2013; Fiori/Tozzola 2014; Baldi 2015; Dresken-Weiland 2016; Munkhammar 2016; Augenti/Christie/Laszlovsky/Ripoll 2017; Bencivenni 2018; Fiori 2018; Guarnieri/Montevecchi 2018; Johnson 2018.

There is, then, a series of contributions devoted to specific objects or production activities: imports and use of marble (Isabella Baldini); production and patronage of ivory (Cristina Carile); bricks and vaulting tubes (Enrico Cirelli); pottery (Chiara Guarnieri); the generation of writing culture (Deborah Deliyannis); grave goods and funerary customs (Debora Ferreri); minting (Vivien Prigent). The volume ends with stimulating final remarks by John Haldon and Judith Herrin.

Seen through the prism of labour and production, what kind of image did Ravenna convey in Late Antiquity? We have a city that connotes itself simultaneously as both consumer and productive centre. It could be argued that this feature was shared by most urban settlements in the ancient and medieval world; and yet, what is really peculiar about Ravenna is the contrast between a city which was not big demographically-speaking and the sophisticated articulation of its labour market. We are told by the contributions in this volume that Ravennate society imported huge quantities of Proconnesian marble from the East, ivory from Egypt, high-priced wines and olive oil from the Fertile Crescent and Istria, papyrus perhaps from Sicily, and grain from Istria and Sicily. It also necessarily had to import precious metals such as gold, silver and copper for the functioning of its mint. Who were the actors who supported this economic demand? Certainly, in addition to the imperial court and that of the Ostrogothic kings, the church of Ravenna also played a remarkable role, becoming increasingly important starting from the early 6th century onwards. Furthermore, the army should especially be taken into account when analyzing the 5th century, as it must have reached important numerical concentrations at certain moments during this time span. Yet if, on the one hand, these prominent 'public' actors provided Ravenna with its late antique economic imprint, it did not constitute the unique forces that supported the demand. There was also an active middle class in the city that was styled in the written sources as *virī honesti*. It represented a segment of the population which was endowed with economic means that was active along with the big public actors (court and church) in supporting the cycle of production, consumption and demand in a much larger way than the laic aristocracy did – which was in itself quite evanescent in Ravenna until at least the early 9th century. I would add that this feature, namely the socially-composed nature of economic demand in the city, remained a visible trait even during the early Middle Ages. Due to the series of characteristics that the history of production and craftsmanship has in Ravenna, it constitutes a privileged observatory for economic and social history, although perhaps not easily comparable to other urban models witnessed in the late antique Mediterranean.

In completing this volume, I have incurred some debts. I want to thank Prof. David Freedberg and the Italian Academy at Columbia University for hosting the workshop in New York in (the now-distant) March 2013, as well as the Fondazione Flaminia of Ravenna and the former vice-mayor of Ravenna, Mr. Giannantonio Mingozi, for having generously co-funded the organization of this same workshop. I also wish to thank all the Editors of the 'Millennium Studies', especially

Prof. Wolfram Brandes, for including this volume in the series, as well as Dr. Veronica Casali for helping me during the editorial process.

Bibliography

- Augenti, Andrea, ed. 2006. *Ravenna tra Oriente e Occidente: storia e archeologia*. Ravenna.
- Augenti, Andrea, ed. 2011. *Classe. Indagini sul potenziale archeologico di una città scomparsa*. Bologna.
- Augenti, Andrea and Bertelli, Carlo, eds. 2006. *Santi Banchieri Re. Ravenna e Classe nel VI secolo, San Severo il tempio ritrovato*. Milano.
- Augenti, Andrea and Bertelli, Carlo, eds. 2007. *Felix Ravenna. La croce, la spada, la vela: l'alto adriatico fra V e VI secolo*. Milano.
- Augenti, Andrea, Christie, Neil, Laszlovsky, Jozef and Ripoll, Gisela, eds. 2017. *La Basilica di San Severo a Classe. Scavi 2006*. Bologna.
- Augenti, Andrea, Ficara, Marisa and Ravaoli, Enrico, eds. 2012. *Atlante dei beni archeologici della provincia di Ravenna, I, Il paesaggio monumentale del medioevo*. Bologna.
- Baldi, Elena. 2015. *The Coin Evidence as a Source for the History of Classe (Ravenna). Excavations of the Harbour Area (2001–2005) and the Basilica of San Severo (2006–2010)*, BAR International Series 2736. Oxford.
- Baldini, Isabella, ed. 2011. *L'avventura archeologica di Giuseppe Gerola dall'Egeo a Ravenna*. Bologna.
- Barsanti, Claudia, Paribeni, Andrea and Pedone, Silvia, eds. 2008. *Rex Theodericus: il Medaglione d'oro di Morro d'Alba*. Roma.
- Bencivenni, Alice. 2018. *Ravenna. Le iscrizioni greche*. Milano.
- Cirelli, Enrico. 2008. *Ravenna: archeologia di una città*. Borgo S. Lorenzo.
- David, Max. 2013. *La basilica di S. Croce: nuovi contributi per Ravenna tardoantica*. Ravenna.
- Dresken-Weiland, Jutta. 2016. *Die frühchristlichen Mosaiken von Ravenna: Bild und Bedeutung*. Regensburg.
- Fiori, Cesare and Tozzola, Eliana, eds. 2014. *San Giovanni Evangelista a Ravenna: storia di una chiesa, di mosaici perduti e di mosaici ritrovati*. Ravenna.
- Fiori, Cesare. 2018. *Tecnica e arte del mosaico antico*. Ravenna.
- Guarnieri, Chiara and Montevecchi, Giovanna, eds. 2018. *Il Genio delle Acque. Scavi nelle piazze di Ravenna (DEA, Documenti e Evidenze di Archeologia, 9)*. Ravenna.
- Herrin, Judith and Nelson, Jinty. 2017. *Ravenna, Its Role in Earlier Medieval Change and Exchange*. London.
- Jäggi, Carola. 2013. *Ravenna. Kunst und Kultur einer spätantiken Residenzstadt. Die Bauten und Mosaiken des 5. und 6. Jahrhunderts*. Regensburg.
- Johnson, Mark. 2018. *San Vitale in Ravenna and Octagonal Churches in Late Antiquity*. Wiesbaden.
- Kniffitz, Linda, ed. 2009. *L'imperium e l'oblatio nei mosaici di Ravenna e Costantinopoli, Centro Internazionale di Documentazione sul Mosaico*. Ravenna.
- Manzelli, Valentina. 2000. *Ravenna. Città romane, 2*. Roma.
- Mauro, Maurizio, ed. 2001. *Ravenna Romana*. Ravenna.
- Mauro, Maurizio, ed. 2005. *I porti antichi di Ravenna*. Ravenna.
- Mauskopf Deliyannis, Deborah. 2010. *Ravenna in Late Antiquity*. Cambridge.
- Montevecchi, Giovanna, ed. 2004. *Archeologia urbana a Ravenna: la Domus dei Tappeti di Pietra, il complesso archeologico di via D'Azeglio*. Ravenna.

- Munkhammar, Lars. 2016. *La Bibbia dei Goti, Ravenna e Teoderico. Un antico manoscritto, il Codex Argenteus*. Ravenna.
- Pasi, Silvia. 2006. *Ravenna, San Vitale: il corteo di Giustiniano e Teodora e i mosaici del presbiterio e dell'abside*. Modena.
- Penni Iacco, Emanuela. 2004. *La basilica di S. Apollinare Nuovo di Ravenna attraverso i secoli*. Bologna.
- Penni Iacco, Emanuela. 2011. *L'arianesimo nei mosaici di Ravenna*. Ravenna.
- Ranieri, Egidio. 2006. *La monetazione di Ravenna antica dal V all'VIII secolo: impero romano e bizantino, regno ostrogoto e longobardo*. Bologna.
- Ravenna da capitale imperiale a capitale esarcale* (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo). 2 vols. Spoleto 2005
- Rizzardi, Clementina. 2011. *Il mosaico a Ravenna. Ideologia e arte*. Bologna.
- Russo, Eugenio. 2003. *L'architettura di Ravenna paleocristiana*. Venezia.
- Sotira, Letizia. 2013. *Gli altari nella scultura e nei mosaici di Ravenna (V-VIII secolo)*. Bologna.
- Spadoni, Claudio and Kniffitz, Linda, eds. 2007. *San Michele in Africisco e l'età giustiniana a Ravenna*. Milano.
- Tagliaferri, Maurizio, ed. 2005. *La chiesa metropolitana ravennate e i suoi rapporti con la costa adriatica orientale*. Imola.
- Verhoeven, Mariëtte. 2011. *The Early Christian Monuments of Ravenna: Transformation and Memory*. Turnhout.
- Vernia, Barbara. 2009. *Leggere i muri: analisi degli edifici di culto nella Ravenna del V secolo*. Bologna.
- Vespignani, Giorgio. 2001. *La Románia italiana dall'Esarcato al Patrimonium*. Spoleto.

Paul Arthur

1 The Changing Geography of Artefact Production in the Late Antique and Early Byzantine Mediterranean

Abstract: Archaeology is helping to define the changing geography of artefact production between the 6th and the 8th centuries, a seminal period for the economic development of the later Middle Ages. This paper presents a selection of the evidence for different classes of resources and objects, arguing that the geography of professional artefact production was largely conditioned by a policy of survival of the post-Roman successor states, particularly Byzantium, the élite and the capital cities. It permitted the maintenance or redirection of communication networks and the distribution of many products to government officials, the army and other privileged parties, throughout the Mediterranean and beyond. The bulk of the population, on other hand, with limited access to capital and to marketplaces, had to rely ever increasingly on self-sufficiency in the supply of fundamental items of daily use.

For some time various scholars have avoided using terms like “decline and fall”, “collapse”, or even “crisis”, in the context of the end of the Roman Empire in the West, preferring to use words that hold no necessarily negative attributes, such as “transformation”.¹ Of course, one person’s or one Empire’s ruin may well have been someone else’s success, as all depends upon individual fortunes and standpoints. In the Western world, scholars often tend to use these words in the context of the western Roman Empire looking outwards, from the “Roman” point of view, rather than inwards, from the point of view of the peoples who supplanted the Empire. I do not want to enter into a debate that is not my current remit, if only to say that I greatly appreciate this aspect of the book by Bryan Ward-Perkins² that attempts to address the question of the fall of the Western Roman Empire as the collapse of a civilisation, rather than of its transformation, once again placing a certain amount of weight on the shoulders of successor populations who, given Rome’s economic decline, entered what had been for many centuries a somewhat self-centred Roman “world” Empire. I

¹ See, for instance, Cameron 2012.

² Ward-Perkins 2005.

Note: I would like to thank Salvatore Cosentino for inviting me to take part in this volume. Vasco La Salvia has generously helped me understand Byzantine mining and metallurgy. I also take the opportunity of thanking my former students Brunella Bruno, Simona Catacchio and Marco Leo Imperiale for discussion and useful observations.

also find quite convincing the view of Harper³ that suggests that much had to do with climatic changes and their consequences, quite beyond Roman control or perception. Nonetheless, even racked by crisis, the Empire did not collapse in Late Antiquity, but substantially reshaped its borders, shifting its centre of gravity from the ever more precarious Rome, to the more strategic and defensible Constantinople, and both sought and was made to adapt to the severe changes of the times.⁴

This paper will examine one aspect of adaptation, how the geography of artefact production changed as the western part of the Roman Empire substantially came apart and was eventually replaced, whilst the eastern part was able to survive as a coherent block, largely centred on the Aegean, for centuries to come. It will therefore concentrate on the years from the later 6th century when the emperor Justinian briefly re-conquered part of the West, to the beginning of economic revival during the course of the 8th century, which material effects were to be more clearly seen through the years of growth during the Middle Byzantine period of the 9th and 10th centuries.⁵ Indeed, it will be argued that the geography of professional artefact production was largely conditioned by a policy of survival of the State, the élite and their capital city, which permitted the maintenance or redirection of communication networks and the distribution of many products. Conversely, the bulk of the population, with limited access to capital and to marketplaces, had to rely ever more on self-sufficiency in the supply of fundamental items of daily use.

The theme of the “Geography of artefact production in late antique and early Byzantine Mediterranean” is vast and would require a book or more unto itself, as it is by no means an easy task to try and define a pattern or an all-embracing model with such disparate and imbalanced evidence that currently exists. This contribution will thus concentrate on some aspects that I personally find to be of particular interest, and from the viewpoint of an archaeologist working principally on Byzantine Italy. I have also been careful not to dwell exclusively on the production of ceramics, which are the most studied category of ancient manufactured goods and have been dealt with elsewhere, including in the magisterial synthesis by Wickham on the early Middle Ages.⁶ Ceramics have indeed, and perhaps all too often, been used as proxy-data for the ups and downs of production and exchange, but cannot paint the whole picture. Furthermore, far more has been written about the movement of goods (particularly concerning ceramics, as just noted) than about their production, also because of the prevailing archaeological evidence for the former, in the form of recovered objects with

³ Harper 2017; although see the critique by Sessa 2019.

⁴ Haldon 2016. In writing this paper I have reread the old but still very readable essay by Lopez 1957, which has much that is relevant to the topics discussed here.

⁵ Decker 2016.

⁶ Wickham 2005.

provenance related to their use, rather than for the latter.⁷ As Enrico Zanini has perceptibly observed, the archaeology of goods and of productive and commercial structures is also, in part, the archaeology of the rather textually silent productive and commercial “middle-class”.⁸

That there was a breakdown in the production and circulation of many mass-produced items across most of the ancient Roman Empire is now assured. One of the largest and most efficient industries, that of African Red Slip Ware (Fig. 1) and Tunisian amphorae (Fig. 2), which products were distributed throughout the Mediterranean, the Black Sea and parts of northern Europe, witnessed recession during the second half of the 6th century and effectively collapsed by the beginning of the 8th.⁹ The economic trajectory of African Red Slip Ware, as with many amphorae, appears to witness a gradual reduction in its markets during this period, with products being sent to specific and privileged sites.

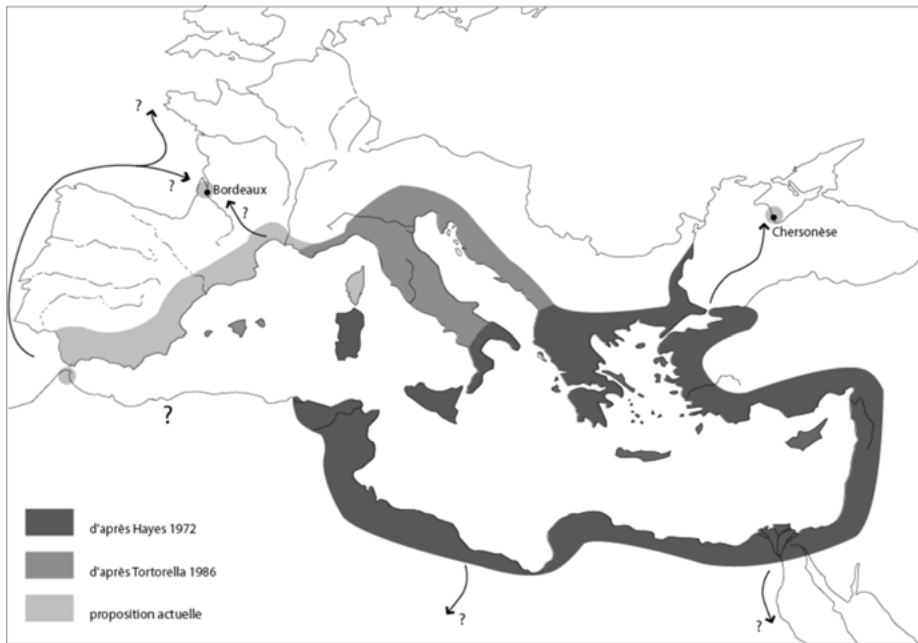


Fig. 1: Distribution of late African Red Slip ware forms 105–106 (courtesy Michel Bonifay).

⁷ An important exception is now the volume edited by Molinari, Santangeli Valenzani, Spera 2015, that concentrates on Rome.

⁸ Zanini 2006.

⁹ Bonifay 2004, 482–485.



Fig. 2: Hill of amphora sherds from the Chouggafia amphora workshop, near Neapolis in northern Tunisia. Tunisian-French mission directed by M. Fantar and T. Ghalia (courtesy Michel Bonifay).

Over the last dozen years or so I have been excavating the remains of a later 7th to early 9th century village in the heel of Italy, at Supersano in southern Puglia, in what was then Byzantine territory.¹⁰ Alongside the recovery of about 7.500 fragments of pottery, all made locally,¹¹ we found only one fragment of imported pottery, a residual piece of North African Red Slip Ware, possibly part of an heirloom, one glass beaker probably from northern Italy¹² and a few fragments of imported volcanic rotary querns apparently from the island of Melos. In sum, long-distance imports at the site were all but absent, and those very few found seem to represent either rare status objects (the glass), or irreplaceable necessities.¹³

In quite stark contrast to these finds are the plethora of objects that come from the many urban and rural contexts dated to the 5th and 6th centuries that have

¹⁰ Arthur, Fiorentino, Leo Imperiale 2008.

¹¹ In this essay I will regard exchange as being local (<50 km/1-day travel), regional or inter-regional, as has recently been defined by Morrisson 2012, 4–5.

¹² Ubaldi 2009.

¹³ Arthur 2011.

been excavated throughout the Mediterranean and beyond (Fig. 3). These late antique sites are almost invariably characterised by abundant imported table-wares and amphorae from North Africa and the East, including Greece, Turkey and the Levant, bronze coins struck at a range of mints, and glass and other artefacts fashioned at a number of, often unidentified, places. The differences between these earlier sites and Supersano is both in the quantity and in the quality of imported goods, with the former witnessing their position within a context of extensive and long-distance trade, and the latter implying substantial self-sufficiency, with negligible trade and external contact. The abundant pottery at Supersano, nonetheless, was still turned on the wheel by professional, perhaps part-time, local potters, likely working mainly within a radius of about 15 km from the site, and possibly exchanged for the fruits of the earth. At the same time, in extreme cases, such as in parts of Greece and on the island of Cyprus, some people even relied on hand-made ceramics, perhaps produced at a household level, although there is no reason to suppose that they too did not appear in local markets as well.¹⁴



Fig. 3: The impressive quantity of 6th and 7th century finds, mainly imported ceramics, from the Crypta Balbi, Rome (courtesy Mirella Serlorenzi).

¹⁴ Peacock 1982; Rautman 1998; Arthur 2007, 165–169; Vroom 2012, 382–384.

Before examining the changing geography of artefact production, it is worth recalling conditions or regulatory factors necessary for artefact production, which I believe may be summarised as:

1. Demand for basics and commodities;
2. Availability of raw materials. Of course, some raw materials were transported afar (e.g. metals, glass);
3. Availability of labour and technological (and, at times, artistic) ability.
4. Availability of markets;
5. Availability of transport infrastructures and communication networks.

Whilst not being possible to gauge the respective influences of these factors in the processes of change, it is undeniably their decline in scale, triggered by the political and environmental changes of Late Antiquity, that led to the changing geography of artefact production and distribution. The varying crises of Late Antiquity led to a flagging population, with diminishing resources and capital, that led to a fall in supply and demand, both in quantity and in quality of basics and commodities. Furthermore, weakening State expenditure, with redirection of many resources to the army and the administration, curtailed investment in the upkeep of a large number of infrastructures and communications.

The early part of this time period is tolerably well known and for which there are abundant studies on artefact production throughout the Mediterranean world and beyond, both as regards what were probably perceived of as daily necessities, and what may be considered to have been luxury items. Indeed, such had been the scale of production and consumption in Late Antiquity that Anthea Harris¹⁵ has referred to the period as one of incipient globalization, viewing the Mediterranean and Eurasian world as a form of commonwealth.

After the end of antiquity State regulation and control seems to have become ever more rigorous in an attempt at survival, although market forces did persist which, according to Laiou and Morrisson,¹⁶ helped the Byzantine Empire not only to survive, but also to grow after the crises of the 6th to 8th centuries. Indeed, as archaeology progresses, one can now begin to discern the existence of various exchange mechanisms that reflect the diversity of consumers, needs and corresponding productions or goods.

On a scale of production we may first of all recognize the high quality manufacture of artefacts for the Imperial court and for important functionaries that included items for use and items for gift exchange, which latter may substantially be equated with diplomacy.¹⁷ Wealthy landowners will have had access to some such products, although control in the production of important gold and silver metalwork, ivories

¹⁵ Harris 2007.

¹⁶ Laiou/Morrisson 2007, especially 89.

¹⁷ Baldini Lippolis 1999, 235.

and silk was largely in the hands of the State. Thus, a large part of the production was centred on Constantinople itself, or in areas where the Empire had access to primary resources. The manufacture of luxury products together with those essential to the State, was controlled or carried out in Imperial workshops (the *ergodosia*), some of which were located near the Imperial palace in Constantinople (Fig. 4).¹⁸ All this relied upon the importation of small precious and semi-precious stones, pearls, ivory, some cloths, woods, metals and other materials, as well as on re-use.¹⁹ The studies of Marlia Mundell Mango have enlightened us on some of these aspects of production, particularly for silver plate, thankfully often bearing control stamps, which would have been produced either from reworking aged items, or working silver from quarries.²⁰ Workshops



Fig. 4: Silver dish manufactured in Constantinople and dated by its control mark to A.D. 628–9, during the reign of Emperor Heraclius (The Metropolitan Museum of Art, New York).

¹⁸ Oikonomides 2002, 993.

¹⁹ Imported gemstones: Drauschke 2010. On luxury manufacture in general see the volume Entwistle/Adams 2010.

²⁰ Mundell Mango 2009.

included sites in Cilician Turkey, an area repeatedly contested with the Arabs, but also Rome, Tarsus and Antioch.²¹ Until the Arab invasions, goldsmiths are attested at Nessana in Palestine and Aphrodito in Egypt,²² probably for the minor productions of jewellery, and there must have been countless others, especially for less costly products. Top-end luxury goods will often have been objects of patronage, either through the control of specialised artisans or through commandeering. In such cases, there must often have been direct contact between client and craftsman.

Aside from court manufacture, Byzantium also needed to produce items that served the various arms of the State, including the army (largely for defence) and the public administration. Thus, to the list of things mentioned above we should add clothes made of various textiles, leather items, weapons and armour, cooking and eating utensils, things that during the later Empire were made across the lands and redistributed through a complex logistic machinery.²³ Given the heterogeneous nature of the Byzantine forces, some weapons and other items may, perhaps at times, have been manufactured even outside of the Empire's boundaries. As the decades passed, an even more significant part of this strictly regulated production must have also occurred at Constantinople itself, although various other cities and towns certainly continued to take part so as to be nearer to the consumers, as the arms for the majority of the forces were provided for by provincial or thematic administration.²⁴ The Byzantine historian Angeliki Laiou claimed that "most of the early Byzantine workshops for arms, dyeing and weaving which provided arms for the army and the court all over the Empire disappeared in the 7th century crisis", with production of important armaments being relocated at a few major centres.²⁵ A significant archaeological site as regard's official manufacture is that recently excavated at Hadrian's *Atheneum* near the Capitoline in Rome, which served for the production of various metal items between the late 6th and beginning of the 8th century, and may also have been linked to the Imperial mint.²⁶

Some of the most frequent Byzantine objects found in excavations are bronze buckles, which have been made the object of numerous studies. Some types have a surprisingly extensive distribution. The so-called Corinth-type buckle (Fig. 5), for instance, datable in and around the 7th century,²⁷ is to be found within and without the Byzantine Empire, from southern Spain to the Crimean peninsula. It is very difficult to imagine a single workshop for the manufacture of such a ubiquitous object, although one might hypothesize that it was produced for Byzantine officials or troops at

²¹ Mundell Mango 2009, 222.

²² Jones 1964, 847.

²³ On the late Roman arms factories we may consult James 1988.

²⁴ Haldon 2002, especially 72.

²⁵ Laiou/ Morrisson 2007, 74. On the earlier, late Roman, arms factories see James 1988.

²⁶ La Salvia 2015.

²⁷ Riemer 2000; Schulze-Dörlamm 2009, 19–26.



Fig. 5: Corinth-type bronze *fibula* or belt-buckle from Puglia (Laboratory for Medieval Archaeology, University of Salento).

various centres. The fact that it is sometimes found outside of the Empire, and even in female burials,²⁸ might not be too surprising if we consider the mercenaries that worked within the Byzantine army. Another widely distributed buckle is the D-type, which concentration in Sicily suggests that it may have been produced on the island.²⁹

Indeed, Sicily was probably one of the major centres of artefact manufacture and, more specifically, the town of Syracuse, that archaeology suggests was a major producer of goods in early Byzantine times. Such was its strategic importance that Syracuse had even been considered as a potential alternative to Constantinople as capital of the Empire by Emperor Constans II, even if it turned-out to be site of his assassination in 668. The island was a significant centre of agricultural production from Justinianic times into the 9th century, as well as being the site of two imperial mints at Catania and Syracuse, the latter from whose bronze (and a certain amount of gold) coins circulated in the Balkans and Black Sea as late as the 8th century.³⁰

The numerous objects studied by Paolo Orsi,³¹ and the wealthy corpus recently compiled by Suzanne Metaxas,³² display an abundance of 6th, 7th and 8th century Byzantine material from the island. To the list of metal brooches, buckles, rings, earrings, and *encolpia*, which often find close parallels in other parts of the Byzantine world, we may perhaps add larger metal items such as the so-called “Coptic” bronze hanging bowls, that have a large distribution both within and outside the boundaries of the Empire,³³ as well as bronze candlesticks, perhaps for the Church.

²⁸ Curta, 2014, 101–103.

²⁹ Metaxas 2012.

³⁰ Morrisson 1998; Papadopoulou 2012, 313.

³¹ Orsi 1942; see also Metaxas 2008.

³² Metaxas 2009.

³³ Decker 2016, 169; see also Baldini/Schiaffino 2015.

Indeed, in many regards, the production dependant on the Western and Eastern Churches had close parallels with State manufacture. The Roman and Greek Churches both needed to provide for their courts, both in the centres and in the peripheries (the dioceses), for administration and for diplomacy and gift exchange. It is interesting to read, for instance, of Pope Gregory the Great gifting western wood to Eulogius, Bishop of Alexandria, in 595/6 in order to build ships.³⁴ Gregory also reprimanded Bishop Paschasius of Naples for spending an inordinate amount of his time building ships and losing 400 *solidi* through his labours!³⁵ Such craft may have been intended to market the Church's own produce, as may be hypothesised by the appearance of George, the priest and *naukleros* (ship-captain), whose name was inscribed on a bronze steelyard found on the early 7th century Yassi Ada shipwreck, off the coast of south-east Turkey.³⁶ Both the Eastern and Western Churches, of course, were also important agents involved in the manufacture of quotidian items, including ceramics and metalwork. For instance, small crosses in bronze, lead, steatite or bone, and reliquary crosses in bronze, which do not seem to have been for the exclusive use of members of the clergy or monastic orders, appear to have been produced at many sites which were not necessarily directly linked to religious foundations. Such crosses are extremely common across the entire Byzantine world and stone moulds for their manufacture have been found stretching from Chersonesos to Naples.³⁷ Their manufacture at Carthage is, interestingly, attested by a 6th or 7th century unfinished pendant cross from a cuttlefish mould.³⁸

Monasteries also played a part in the production network. The most eloquent archaeological evidence for craft production in the early medieval Mediterranean comes from the excavations at the Crypta Balbi in Rome, site of the monastery of San Lorenzo in Pallacinis. The discovery of over 800 objects illustrates the production of metal and ivory items during the course of the 7th century, from common bronze buckles to composite luxury objects. The stock of materials to be reworked into objects included old Roman intaglios and gemstones (even broken), rock crystal, garnets, sapphires, emeralds, obsidian, coral and coloured glass. Of particular interest is the mix and synthesis of styles in the objects retrieved, from Romano-Byzantine to Germanic and Lombard, some with such close parallels to items in Lombard cemeteries in Italy that it is almost certain that Rome's production was also addressed to and perhaps even commissioned by an international and not just Byzantine élite clientele.³⁹

³⁴ Gregory the Great, *Epistulae* VII, 40.

³⁵ Gregory the Great, *Epistulae* XIII 29.

³⁶ Van Alfen 1996, 212.

³⁷ Pitarakis 2006.

³⁸ Eger 2010, 136–137.

³⁹ Ricci 2001; Christie 2010.

Early medieval monastic production is also very well illustrated by the excavations of the Benedictine monastery at San Vincenzo al Volturno which, whilst not Byzantine, but Carolingian, provides us with an idea of the productive functions of such religious centres.⁴⁰

Books were also produced in ecclesiastical and monastic *scriptoria*. Indeed, they were widely disseminated, as is becoming ever more evident through the archaeological findings of bronze bookbinding pins and ring fasteners, in the absence of the books themselves. They are, unfortunately, rarely well dated, although an example from Salamina on Cyprus would appear to have been associated with a coin of Constans II.⁴¹ Apart from Salamina, the list of find spots includes Amorium, Rome, Ravenna, Otranto, Sicily (possibly Syracuse or its hinterland), Pliska (Bulgaria), Chersonesos, Corinth, Spetses (off the eastern Peloponnese) and, of course, Istanbul. The papyrus pages of these books, eventually to be supplanted by parchment, would have come from the Mediterranean, and traditionally from Egypt, although Syracuse may have been an alternative, although limited, source of supply, at least until the Arabs invaded Sicily.⁴²

Religious production did not end at manufacture by the Church itself. External craftsmen will have worked for the Church, either as specialists, for sculpture, painting, and other tasks, or as labourers. Many smaller religious items such as pectoral crosses and pilgrim flasks (Fig. 6),⁴³ for instance, or items with religious connotations, such as lamps, or ceramics that often bore crosses, were undoubtedly manufactured by independent artisans.⁴⁴

Large-scale manufacture of objects for public use still continued after the demise of the Western Roman Empire, perhaps until the later 6th century in the West and the later 7th century in the East. As Arnold Jones has shown, a 6th-century tax list of the large village of Aphrodito in Egypt lists many minor producers, including linen-weavers, wool-weavers, a dyer and fullers, tailors, shoemakers, a potter, three carpenters, two boat builders, coppersmiths, and five goldsmiths.⁴⁵

Gradually, however, during the course of the 6th and 7th centuries, there was both a quantitative and a qualitative scaled-down continuity in professional production, that was evermore restricted to the centres of population where there was still sufficient demand and spending capability. It was thus generally only relatively large centres that could guarantee the manufacture of goods, whilst there must have been a lack of easily available commodities for a substantial part of the population, living

⁴⁰ Hodges/Leppard 2011.

⁴¹ Metaxas 2009, 212–3; See also Lightfoot 2014.

⁴² “Of necessity imported from Egypt” according to McCormick 2001, 633.

⁴³ Anderson 2005; 2007.

⁴⁴ Caseau 2014.

⁴⁵ Jones 1964, 847; see also Mundell Mango 2009, 7.



Fig. 6: Pilgrim flask from the sanctuary of St. Menas in Egypt, depicting the saint between two camels. Circa 7th century. (The Metropolitan Museum of Art, New York).

afar from the few “large” urban centres and markets.⁴⁶ This can be seen particularly through the study of ceramics, the most common and researched manufactured product. After the disappearance of the red-slipped wares in North Africa, Cyprus and Anatolia, by far the largest amount of professional fine and table wares was made to supply Constantinople, possibly in kilns on the nearby Sea of Marmara. However, even the output of places such as Rome, Naples or Gortyn on the island of Crete, was of better technical and artistic quality than ceramics produced in many other locations, thus witnessing a general decline in production. The recently-discovered kiln complex at *Philosophiana* in Sicily illustrates the ceramics that were available to what was possibly a relatively large local population in the 8th and first half of the 9th century.⁴⁷ According to the excavators, the site, originally 21 hectares in dimension, had shrunk to some 10 hectares by the early Middle Ages. Few other kiln sites have been excavated, including one at *Misenum*,⁴⁸ close to the important centre of Naples, and one at Otranto, the major port-city and network node that united the Byzantine East with the Byzantine West.⁴⁹

⁴⁶ Of course, it was not just a matter of being able to afford goods but also of being able to carry them home and, in a non-monetized economy, of being able to transport exchangeable surplus to the marketplace.

⁴⁷ Vaccaro/La Torre 2015.

⁴⁸ De Rossi 2015.

⁴⁹ Leo Imperiale 2003; 2004.

Despite the appearance of some hand-made pottery on Cyprus during the course of the 8th century or later, many ceramics found by archaeologists there continue to reveal “a confident use of technology, traditional manufacturing techniques, and skilled workmanship” particularly from the well-known Dhiorius kilns, that eventually also benefitted from the importation of Islamic technology.⁵⁰ Indeed, as has often been remarked, in contrast to Byzantine territories, both ceramics⁵¹ and other cultural products developed in eastern Mediterranean Islamic areas,⁵² illustrating a shift of the economic balance within the Middle Sea. Cyprus, nonetheless, also appears to have been one of the last areas to have manufactured and exported red-slip tablewares, well into the 8th century.⁵³

Chris Lightfoot, in his studies of the town of *Amorium* in Asia Minor,⁵⁴ remarked upon the gradual disappearance of mould-made lamps in the Byzantine world during the 7th century, followed by the disappearance of almost all ceramic oil lamps. They were presumably substituted by alternative forms of lighting, particularly candles, perhaps because of rising costs of olive-oil. Besides Constantinople,⁵⁵ mould-made lamps were still being made into the 8th century in the Levant, where the Arabs may have ensured production after the end of Byzantine domination,⁵⁶ as well as in the western Byzantine centres of Rome,⁵⁷ at Misenum, near Naples⁵⁸ and on the island of Sicily (Syracuse) (Fig. 7). Conversely, in 8th century Otranto they were being manufactured by hand.

One of the few innovations in pottery production during the 8th century was the spread of lead glazed ceramic manufacture, again probably stimulated by production and consumption at Constantinople. Alongside the capital, Rome, Naples, Sicily, Ravenna, Otranto and, significantly, various places in Asia Minor produced glazed wares, which often included the chafing-dish, a very cultural-specific cooking vessel that perhaps circulated along with new Byzantine eating habits influenced by Middle Eastern cooking.⁵⁹

Glass, instead, seems to have become scarcer after the 6th century. Its production was largely a two-fold process involving, firstly, the preparation of raw glass in primary kilns, and secondly the manufacture of glass items, often elsewhere and sometimes very far from the primary production. Slabs or ingots of raw glass were made in areas like northern Egypt and the Levantine coast, where quartz sands and natron were in

⁵⁰ Zavagno 2017, 168–169.

⁵¹ E.g. Vroom 2009.

⁵² E.g. Evans 2015.

⁵³ Armstrong 2006.

⁵⁴ Lightfoot 2007, 285.

⁵⁵ Hayes 1992.

⁵⁶ Hadad 2002.

⁵⁷ Romei 2004 291–292.

⁵⁸ De Rossi et al. 2010, 495.

⁵⁹ Cacciaguerra 2009; Vroom 2012, 364–367; Vassiliou 2016.



Fig. 7: Seventh and eighth-century pottery lamps from Sicily (The British Museum, London).

good supply, although a few other less significant areas are known.⁶⁰ These slabs were exported around the Mediterranean to secondary manufacturing centres, where they were used to manufacture glass objects. In the absence of imported glass slabs, recycled glass or cullet was often used in the production of glass objects. In Late Antiquity there must have been myriad secondary workshops,⁶¹ including centres such as Ravenna's port of Classe,⁶² Thessaloniki⁶³ and Labraunda,⁶⁴ to cite just a few. Higher quality items were the monopoly of a few specialised workshops located traditionally in the East, in Syria, the Levant and Alexandria,⁶⁵ close to the supplies of suitable sand and natron, as well as in the Rhineland, centred on Köln.⁶⁶

With the loss of Egypt and the Levant to the Arabs during the 7th and 8th centuries, the centralised preparation of natron glass ingots appears to have come to an end. From about the 6th century a new glass appears in the Mediterranean, based on soda-ash instead of natron, and much more reliance seems also to have been made of recycled waste glass, which often combined waste from both natron and soda-ash based glass.⁶⁷ Nonetheless, in late 8th century Butrint, in Albania, wine glasses were made from raw chunks of glass apparently imported mainly from

⁶⁰ Neri 2016, 28–31.

⁶¹ Putzeys/Lavan 2007, 85–93.

⁶² Augenti 2011, 26–27.

⁶³ Antonaras 2014; 2016.

⁶⁴ Schibille 2017.

⁶⁵ Rodziewicz 2009.

⁶⁶ In general see Keller/Price/Jackson 2014.

⁶⁷ Neri 2016, 31.

the south-eastern Mediterranean.⁶⁸ The authors note that “together with the scarcity of supply, glass appears to have been used increasingly for small utilitarian vessels of limited function”.⁶⁹ Similarly, writing about Athens, Stern commented that glass vessels appear “to have become increasingly rare in the 7th century”.⁷⁰

In the early 1960’s Polish archaeologists excavating on the island of Torcello made the extraordinary find of a workshop for glass vessels and mosaic tesserae, now dated to the 9th century, perhaps heralding the industry for which the Venetian lagoon was soon to become renowned.

The relatively scarcity of glass objects after the 7th century, nonetheless, suggests a decline in the number of production sites and their concentration in fewer significant centres. However, given its ease of manufacture, many basic objects may have been manufactured by itinerant craftsmen who moved around the country, producing items on demand by making use of broken glass. Itinerant glass workers are attested in documentary sources in Anglo-Saxon England.⁷¹

Itinerant artisans probably also produced metal objects that, aside from jewellery or pectoral crosses,⁷² have received relatively little attention.⁷³ Many articles are likely to have been produced in small workshops annexed to shops for immediate retail, as appears to have been the case of metalware, and possibly glass and jewellery at Sardis in Turkey, before destruction in the early 7th century.⁷⁴ Later, retail workshops such as those at Sardis, may have largely become unsustainable outside of major population centres. Apart from the important workshops at the Crypta Balbi in Rome (Fig. 8), the iron and bronze-working atelier recently discovered at Piazza Bovio in Naples, dating to the later 6th and early 7th century, may be of particular significance, as it appears closely related to the port, and suggests manufacture not solely for local consumption.⁷⁵

The evidence for metalworking on the sites of old Roman villas after the 6th century, including that of Faragola in northern Apulia,⁷⁶ may appear rather curious.⁷⁷ It might perhaps be explained in the contexts of both the reuse of material and the presence of itinerant craftsmen. Despite the paucity of evidence, it would seem that, at least into the 7th century in Italy, a certain amount of itinerant craftsmanship occurred. This could be suggested by the mould for crescent-shaped earrings found at the small

⁶⁸ Jennings/Stark 2013.

⁶⁹ See also Jennings 2010, 234.

⁷⁰ Stern 2012, 58.

⁷¹ Bayley 2000.

⁷² Pitarakis 2006.

⁷³ See now Böhlendorf-Arslan/Ricci 2012.

⁷⁴ Foss 1976, 16.

⁷⁵ Sogliani 2010.

⁷⁶ Volpe et al. 2012.

⁷⁷ Castrorau Barba 2017.



Fig. 8: Reconstruction of the ateliers at the Crypta Balbi, Rome (Inklink, Florence; courtesy Museo Nazionale Romano).

agro-town of Ruvo di Puglia,⁷⁸ although it may date to the 10th century when demand, production and commerce was on the increase. Indeed, by the 10th century, blacksmiths seem to become more common in villages in Byzantine southern Italy. Such rural blacksmiths may first have been largely an itinerant category during the 7th and 8th centuries, to finally settle-down during the course of the 9th and 10th, with increase in demand for metalwork.

The manufacture of some objects would appear to have been geared substantially so as to assist the people in producing and distributing agricultural goods, often for the benefit of the State, whether through supply or taxation. Lava millstones may be telling.⁷⁹ Good quality rotary querns, an advantage for the efficient production of flour and bread, were manufactured near sources of suitable volcanic rock. Perhaps the largest manufacturer was the island of Melos in the Aegean, although with the lack of publication and analysis of such objects in the Mediterranean, we may just be seeing the tip of an iceberg that may one day prove to be as impressive as the distribution of similar volcanic rotary querns in northern Europe.⁸⁰ Known

⁷⁸ D'Angela 1990; Langó 2010, 376–377, 390 and 400.

⁷⁹ Arthur 2011.

⁸⁰ Pohl 2011.

find-sites include Chersonesos on the northern Black Sea, Butrint in Albania and south-east Italy. Other rotary querns were made around Mt. Etna, in Sicily and, possibly, close to Naples, at Roccamonfina in northern Campania.⁸¹

Around the same time as Melian quernstones may began to have been distributed across the Byzantine Empire, we may perhaps place the appearance of what is now generally known as the “globular amphora”. The standardised ceramic form appeared towards the end of the 7th century and lasted until the 9th, supplanting the many earlier and quite varied commercial amphora types (Fig. 9). Globular amphorae for wine, and perhaps also for olive-oil, were made in the Crimea, in the Meander Valley, on Kos, on Crete, near Naples, on Sicily, at Otranto, and, surely, in various other places. Although their study is still in its infancy,⁸² it is interesting to see how, on the island of Sicily, their distribution indicates a pattern of differential supply, with Tyrrhenian globular amphorae appearing mainly in western Sicily and “Aegean” globular amphorae appearing largely in the eastern half of the island.⁸³ Even though the emergence of the form might simply respond to greater efficiency in production and transportation, its great standardisation across the Empire

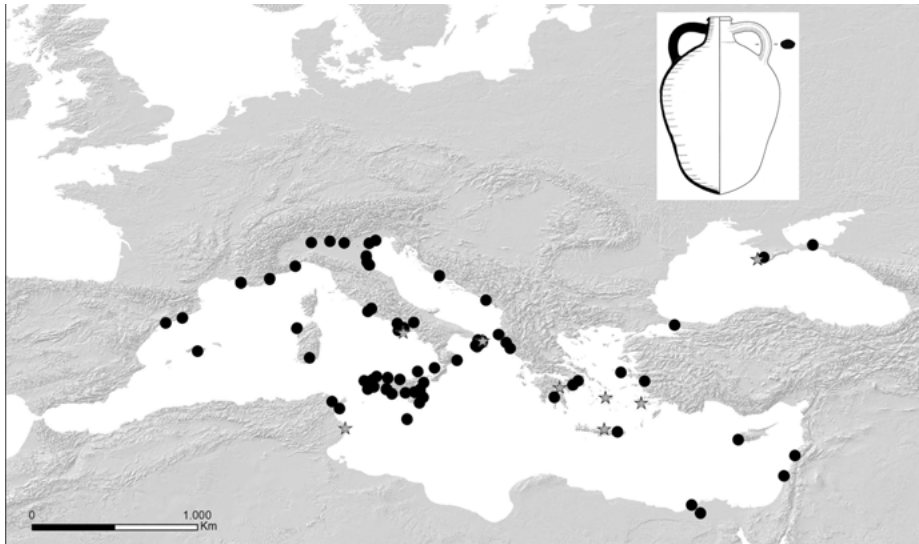


Fig. 9: Globular amphorae and kiln sites (grey stars) across and beyond the Mediterranean (Laboratory for Medieval Archaeology, University of Salento).

⁸¹ E.g. Soricelli/Grifa/Morra 2012.

⁸² See the papers in Gelichi/Molinari 2018.

⁸³ Arcifa/Longo 2015.

suggests that the manufacture and exchange of such vessels was strongly regulated by the Byzantine State, intent on controlling the production, supply and taxation of agricultural produce.⁸⁴

Reworking of broken or discarded objects in metals, glass and stone, also became increasingly commonplace through Late Antiquity and the early Middle Ages, and there even appear to have been specialists in the recycling of materials, particularly in major centres such as Rome.⁸⁵ The small 10th century(?) hoard from Beycesultan in Anatolia, interpreted as belonging to a “metal merchant’s store”, with its mix of broken early and mid- Byzantine bronzes, not only suggests collection of old objects for reuse, but also the longevity of use of individual items.⁸⁶

At the very lowest end of the production scale, after the mid 6th century, there was probably an increase in household or community production of basic necessities, both qualitatively and technologically of simple manufacture, which nonetheless served their purpose. This has been suggested for some of the hand-made ceramics found in parts of Greece. In contexts of self-sufficiency, perhaps many such items did not even reach the marketplace, to be used by their producers or to be locally bartered. Returning to Supersano in Apulia, I wonder if the bone implements, probably used in the production of linen, or the wooden objects discovered, ever reached a market, although the oak cup does presuppose the use of a lathe, which was likely a professional tool.⁸⁷

With the abundant archaeological evidence now available, I take the view that a significant part of the ancient Roman economy was non-agricultural and based on exchange and market forces (Diocletian’s price edict appears to support this), although essentially permitted by substantial agricultural productivity and surplus. Furthermore, I also think that the difficulties that came to the fore in the period under study in this paper weighed evermore in the favour of greater emphasis on agricultural production and controlled distribution, ever further accentuated as both population and surplus diminished across the Byzantine Mediterranean. The State, the Church and other landlords regulated much of the production and distribution of both luxury goods and staples, and it was perhaps the albeit restricted and directed movement in bulk of agricultural goods that still largely encouraged the manufacture and trade in selected artefacts.⁸⁸ Thus, the continuity of craft

⁸⁴ Arthur 2018.

⁸⁵ Molinari 2015, 621–624.

⁸⁶ Wright 2000.

⁸⁷ Arthur/Fiorentino/Leo Imperiale 2008.

⁸⁸ Already in Roman times it would seem that ceramics and other artefacts accompanied tradable staples, so it would be extremely unlikely that many artefacts in Byzantine times travelled substantial distances in their own right. In the case of ceramics, as landowners may often have owned the land where both agricultural surplus and pottery was produced, it may have been their trade in the former that permitted the movement of the latter: Poblome 2004, 500.

production, based primarily on sufficient demand, would have benefitted, if not actually been promoted, by being located at a node on an exchange network. Until the 7th century, the enormous distribution of African and eastern red-slipped tablewares was made possible by the traffic in African oil and grain, which relied on a strong transport network (ports, infrastructures, ships and people). When the latter failed, so did the former. Through Late Antiquity, as the ancient Roman world broke apart and population declined, so did the scale of communications and exchange across the Mediterranean and beyond.

Dramatic change appeared earlier in most of the West (but perhaps later in North Africa and Sicily) than in the East, where there was a greater measure of political or social continuity and financial security. Nonetheless, by the mid 7th century, even in the Byzantine heartlands of the East there was a “severe dislocation of those mechanisms that sustained such specialized industries and commercial activities”.⁸⁹ There was, to use the words of Bryan Ward Perkins,⁹⁰ a lower level of economic complexity.

A large part of North Africa, France, the Spanish peninsula and Italy had already succumbed to invading population groups from northern Europe and the Ukraine by the 6th century. Although some of these territories were retaken by the Emperor Justinian, much of Italy was once again lost with the arrival of the Lombards in 568, whilst the Balkans succumbed to the Slavs around the same time, and the entire Levant and the Maghreb were finally lost to Arab expansion during the course of the 7th century. One immediate consequence of these invasions was, clearly, the loss of certain key areas for the extraction of raw materials which, above all, concerned fundamental metals for the State. Indeed, it is not difficult to imagine a substantial decline in mining and metalwork in the dropping levels of windborne lead and copper particles during Late Antiquity that are evident in the atmospheric pollution documented by scientists through Greenland ice-cores and Swiss peat bogs.⁹¹

The subsequent decrease in the quantity of long-distance exchange during the course of the 6th and 7th centuries led to a substantial reorganisation and relocation of manufacturing activity, although within a context of reduced demand by the Byzantine institutions and populace, abetted by severely diminished urban populations. Less dramatic than has been advocated in the past, connectivity (to use the Horden and Purcell keyword⁹²) appears to have become far more cellular, being favoured through a series of relatively small, but nonetheless interlocked, communication

⁸⁹ Lightfoot 2007, 272.

⁹⁰ Ward-Perkins 2005, 118.

⁹¹ McCormick 2001, 53. Rather than being contradicted, this is nuanced by the evidence for environmental pollution during the Roman/Byzantine period in Egypt and the Levant: Mundell Mango 2009, 221. For Spain see Kylander et al. 2005. See also the cautionary words of Scheidel 2009, concerning the use and interpretation of archaeological data.

⁹² Horden/Purcell 2000.

and trade networks that probably permitted greater regional, than interregional, exchange.⁹³ The networks seem mainly to have been centred on coastal and island nodes, as Byzantium became a thalassocracy, with far less contact with most interior regions as overland connectivity waned. This is not to say that such or similar exchange networks did not exist in Roman times, but that they are not as evident today, concealed by the considerable interregional exchange exemplified by the *annona* and by the free-trade of Rome, and now by the archaeological identification of ceramics and other goods from southern Spain, North Africa, the Aegean and Asia Minor and elsewhere that stocked the markets of the Empire. Naturally, as a major player in the post-antique Mediterranean, Byzantium was able to maintain an extended communication network that contained these smaller overlapping networks, leading to the possibility of a capillary distribution of a series of artefacts. Only prestige goods or those fundamental to the State, the Church and their wellbeing could be had through the extended network, channelling British silver and tin through monastic sites in Cornwall,⁹⁴ for instance, or almandine gemstones from Afghanistan through Red Sea ports, largely to be worked into precious objects at Constantinople, Carthage (until it lasted) or at few other major specialised towns.⁹⁵ Such long-distance contacts may even have permitted monks in Ireland to obtain papyrus.

However, it is still a mute-point as to how much production and exchange occurred at local or regional levels in the Mediterranean, although attentive archaeology should resolve the question in the not too distant future. In contrast to the greater movement of goods in earlier times, commodities of daily and popular use were apparently manufactured wherever conditions permitted, at short distances from their consumption sites, within local and regional networks based on market sites and ports or simple harbours (even beach-front), where *cabotage* could be conveniently practised.

For instance, the study of early medieval cooking ware forms has suggested the formation of a network in the lower Adriatic and the Aegean during the course of the 7th and 8th centuries, which supplanted a much larger late Roman regional ceramic style-area that had embraced much of southern Italy. Similarly, Richard Hodges has recently proposed the existence of three Adriatic-sea networks around the 8th century, based on the study of Adriatic emporia and goods.⁹⁶ He also postulated an Ionian Sea network, with Syracuse towards its eastern edge, that interlocked with the lower Adriatic Sea network.⁹⁷ In the eastern Aegean, Pamela Armstrong, furthermore, has suggested the existence of “an extensive trade network operating between Cyprus and the Asia Minor coast, including the islands as far as Chios, along the

⁹³ Hodges 2012, 230–234.

⁹⁴ Thomas 1988; see also Fulford 1989; Duggan 2018.

⁹⁵ Roth 1980.

⁹⁶ Hodges 2012.

⁹⁷ For Syracuse's long-distance contacts, see now Cacciaguerra 2018.

Levantine coast and inland into Syria, Jordan and Palestine".⁹⁸ It will be interesting to examine how much archaeologically-attested commercial networks and historically-attested Byzantine themes overlapped in reality.

These and other networks were based on hubs, Enrico Zanini's so-called directional centres⁹⁹ that, by way of their political significance and role as centres of population (although we are only talking of a few hundred or thousand people at most), were also significant foci of artefact production: Antioch, Ephesus, Chersonesos, Athens, Corinth, Rome, Naples, Syracuse, Reggio Calabria, Taranto, Otranto, etc. To these should perhaps be added the emporia, apparent centres of administered trade and nodes often sited at political interfaces.¹⁰⁰ The evidence for such emporia in the Mediterranean is still somewhat slight, although the argument for their existence has recently been given a certain weight by the archaeological excavations at Comacchio in the Po delta, north of Ravenna, but south of the Venetian lagoon, and its comparison to the better-known emporia of northern Europe. Sauro Gelichi has brought to light the remains of a trading site particularly active from the end of the 6th century until the beginning of the 8th century. A workshop for metal (iron and others?) and glass production functioned during the second half of the 7th, until the early 8th century.¹⁰¹ Items may have been manufactured so as to be exchanged with goods from the eastern Mediterranean that could, furthermore, be traded to inland settlements up the Po valley, many in Lombard territory. A particularly interesting bronze mould of a classicizing youth from Comacchio is closely paralleled by a glass cameo of a reliquary casket in the diocesan museum of the Lombard centre of Cividale. Comacchio was eventually a failed centre, in so far that it lasted for a short time as an emporium of political significance, giving way to the islands of Venice, located some 84 km (52 miles) to the north.

Other Byzantine emporia in which artefact production was an integral part of their activities also existed. For various, such as Amalfi, their early history is still debateable.¹⁰² The Campanian port-town certainly acted as an emporium, perhaps largely for the exportation of agricultural produce and wood, alongside items manufactured in Naples, although there is little evidence concerning its own artefact production in early Byzantine times, which may have included ivories, bronze-work and textiles.

Perhaps, archaeologically, the best-known emporium, however (though not as well-known as it should be amongst western scholars), is Chersonesos, on the coast of southern Crimea. It was an important Byzantine centre, which manufacturing and trading facilities even aided the development of cultures to the north, including the Scandinavian settlement and later state centred on Kyiv.¹⁰³

⁹⁸ Armstrong 2009.

⁹⁹ Zanini 1998.

¹⁰⁰ Hodges 2012, 282.

¹⁰¹ Gelichi et al. 2012, 177–178.

¹⁰² Citarella 1977; Gaglione 2014.

¹⁰³ Arthur et al. 2003.

Artefacts professionally manufactured within the empire are generally quite recognisably Byzantine, whether produced in Constantinople or in one of the various centres scattered throughout the Mediterranean and the Black Sea. Indeed, in the case of some objects, such as belt fittings, pectoral crosses or globular amphorae, it is often very difficult to say where in the empire they were made. This relative homogeneity in material culture¹⁰⁴ must, at the time, have helped recognition, reinforcing and, at times, even creating a sense of identity or being a part of Byzantine society, even in places like Bulgaria that politically Byzantine they were not. A sense of identity and place in communities across the Mediterranean may have helped the empire to survive the political and economic crises of the early Middle Ages.

Archaeology is now beginning to shed light on the changing geography of production between the 6th and the 8th centuries, a seminal period for the economic development of the later Middle Ages. There is clearly still much to do for the future as we hand over our research to younger generations. Production sites need to be explored and fully published, particularly those concerning the manufacture of non-ceramic commodities, and the same goes for studies of artefact distributions in and around the Mediterranean area. Indeed, from the point of view of both production and consumption some major key sites, though perhaps shadows of their former Roman selves, are hardly known. We can only hope that further enlightened excavation, buttressed by research demands, will soon take place. With the current plethora of available analytical techniques for provenance analysis, residue characterisation and manufacture, they could go a long way towards the understanding of Byzantine workshops, production and the early medieval economy and society.

Bibliography

Primary Sources

Gregory the Great, *Epistulae* = Gregorii I papae *Registrum epistolarum* ediderunt P. Ewald, L. M. Hartmann, I-II, in *MGH, Epp.* II. Berlin 1887–1899.

Secondary Sources

Anderson, William. 2005. "Asia Minor ampullae: Late Antique pilgrim flasks in the Rijksmuseum van Oudheden, Leiden." *Eastern Christian Art* 2: 9–17.

Anderson, William. 2007. "Menas flasks in the West: Pilgrimage and trade at the end of antiquity." *Ancient West and East* 6: 221–243.

¹⁰⁴ As in language, religion, food, exchange values, etc.; see the thought-provoking study by Hamilakis 2013.

- Antonaras, Anastasios. 2014. "An early Christian glass workshop at 45, Vasileos Irakleiou Street in the centre of Thessaloniki." In *Neighbours and successors of Rome: traditions of glass production and use in Europe and the Middle East in the later 1st millennium AD*, edited by Daniel Keller, Jennifer Price and Caroline Jackson, 95–113. Oxford/Philadelphia.
- Antonaras, Anastasios. 2016. *Arts, Crafts and Trades in Ancient and Byzantine Thessaloniki. Archaeological, Literary and Epigraphic Evidence*. Mainz.
- Arcifa, Lucia and Longo, Roberto. 2015. "Processi di diversificazione territoriale nella Sicilia di inizi IX secolo Il contesto di Rocchicella-Mineo (CT)." In *VII Congresso Nazionale di Archeologia Medievale*, edited by Paul Arthur and Marco Leo Imperiale, 361–366. Firenze.
- Armstrong, Pamela. 2006. "Rural settlement in Lycia in the eighth century: new evidence." In *The IIIrd Symposium on Lycia. 07–10 November 2005, Antalya, Proceedings*, vol. I, edited by Kayhan Dörtlük, Burhan Varkıvaç, Tarkan Kahya, Jaques des Courtils, Meltem Doğan Alparslan and Remziye Boyraz, 19–29. Istanbul.
- Armstrong, Pamela. 2009. "Trade in the East Mediterranean in the 8th century." In *Byzantine Trade (4th – 12th centuries): Recent Archaeology of Local, Regional and International Exchange*, edited by Marlia Mundell Mango, 157–178. Farnham.
- Arthur, Paul. 2007. "Form, function and technology in pottery production from Late Antiquity to the early Middle Ages." In *Technology in Transition A.D. 300–650*, edited by Luke Lavan, Enrico Zanini and Alexander Sarantis, 159–186. Leiden.
- Arthur, Paul. 2011. "Rotary hand-querns in volcanic stone in the medieval Mediterranean." In *Bread for the people: The Archaeology of Mills and Milling Proceedings of a colloquium held in the British School at Rome 4th–7th November 2009*, edited by David Williams and Evan Peacock, 205–207. Oxford.
- Arthur, Paul. 2018. "Byzantine 'Globular amphorae' and the early Middle Ages: attempting to shed light on a dark-age enigma." In *I contenitori da trasporto alto-medievali e medievali (VIII-XII secolo). Centri produttori, contenuti, reti di scambio*, *Archeologia Medievale* XLV, edited by Sauro Gelichi and Alessandra Molinari, 281–287. Firenze.
- Arthur, Paul, Fiorentino, Girolamo and Leo Imperiale, Marco. 2008, "L'insediamento in Loc. Scorpo (Supersano, LE) nel VII-VIII secolo. La scoperta di un paesaggio di età medievale." *Archeologia Medievale* XXXV: 365–380.
- Arthur, Paul, Sedikova, Larissa, Yashaeva, Tatiana and Carter, Joseph C. 2003. "Medieval Chersonesos." In *Crimean Chersonesos, City, Chora, Museum, and Environs*, edited by Glenn R. Mack, Joseph Coleman Carter, 29–40. Austin.
- Augenti, Andrea, ed. 2011. *Classe. Indagini sul potenziale archeologico di una città scomparsa*. Bologna.
- Baldini, Isabella and Schiaffino, Rita. 2015. "Suppellettile in bronzo di età tardoantica in Sicilia e Sardegna: produzione, uso e committenza." In *Isole e terraferma nel primo cristianesimo. Identità locale ed interscambi culturali, religiosi e produttivi*, *Atti XI Congresso Nazionale di Archeologia Cristiana*, edited by Rossana Martorelli, Antonio Piras, Pier Giorgio Spanu, 307–316. Cagliari.
- Baldini Lippolis, Isabella. 1999. *L'oreficeria nell'Impero di Costantinopoli tra IV e VII secolo*. Bari.
- Bayley, Justine. 2000. "Glass-working in Early Medieval England." In *Glass in Britain and Ireland AD 350–1100*, edited by Jennifer Price, 137–142. London.
- Böhlendorf-Arslan, Beate and Ricci, Alessandra, eds. 2012. *Byzantine small finds in archaeological contexts*. Byzas 15. Istanbul.
- Bonifay, Michel. 2004. *Etudes sur la céramique romaine tardive d'Afrique*. Oxford.
- Cacciaguerra, Giuseppe. 2009. "La ceramica a vetrina pesante altomedievale in Sicilia: nuovi dati e prospettive di ricerca." *Archeologia Medievale* XXXVI: 285–300.

- Cacciaguerra, Giuseppe. 2018. "Città e mercati in transizione nel Mediterraneo altomedievale. Contenitori da trasporto, merci e scambi a Siracusa tra l'età bizantina e islamica." In *I contenitori da trasporto alto-medievali e medievali (VIII-XII secolo). Centri produttori, contenuti, reti di scambio*, *Archeologia Medievale* XLV, edited by Sauro Gelichi and Alessandra Molinari, 143–173. Firenze.
- Cameron, Averil. 2012. *The Mediterranean World in Late Antiquity 395–700 AD. Second edition. Routledge History of the Ancient World*. London/New York.
- Caseau, Béatrice. 2014. "Les marqueurs de pain, objets rituels dans le christianisme antique et byzantine." *Revue de l'histoire des religions* 231.4: 599–617.
- Castorau Barba, Angelo. 2017. "Metalworking in the 'Post-Classical' phases of Roman Villas in Italy (5th–7th centuries AD)." *Mélanges de l'École Française de Roma, Moyen Âge* 129/2: 411–425.
- Christie, Neil. 2010. "Byzantines, Goths and Lombards in Italy: Jewellery, Dress and Cultural Interactions." In *Intelligible Beauty, recent research on Byzantine jewellery*, edited by Noël Adams, Christopher Entwistle, 113–122. London.
- Cirelli, Enrico. 2008. *Ravenna: archeologia di una città*. Firenze.
- Citarella, Armando. 1977. *Il commercio di Amalfi nell'alto medioevo*. Salerno.
- Curta, Florin. 2014. *The Edinburgh History of the Greeks, c. 500 to 1050. The Early Middle Ages*. Edinburgh.
- D'Angela, Cosimo. 1990. "Le oreficerie bizantine del Museo Nazionale di Taranto", *Puglia paleocristiana e altomedievale* 5: 37–52.
- Decker, Michael J. 2016. *The Byzantine Dark Ages*. London.
- De Rossi, Gianfranco. Forthcoming. "Il porto commerciale di Miseno e la sua produzione ceramica", in *La Ceramica per la storia di Napoli e del litorale flegreo (IV a.C. – VII d.C.). Dagli scavi di San Lorenzo Maggiore ad oggi*, Conference Naples 9–30 ottobre 2015.
- De Rossi, Gianfranco, Di Giovanni, Vincenzo, Miniero, Paola, Salmieri, Simona and Soricelli, Gianluca. 2010. "Il porto di Miseno (Campania – Italia) in età tardoantica: analisi dei contesti ceramici." In *LRCW3 Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean Archaeology and archaeometry, Comparison between western and eastern Mediterranean*, edited by Simonetta Menchelli, Sara Santoro, Marinella Pasquinucci and Gabriella Guiducci, 487–495. Oxford.
- Drauschke, Jörg. 2010. "Byzantine Jewellery? Amethyst Beads in East and West during the Early Byzantine Period." In *Intelligible Beauty, Recent research on Byzantine jewellery*, edited by Noël Adams, Christopher Entwistle, 50–60. London.
- Duggan, Maria. 2018. *Links to Late Antiquity. Ceramic Exchange and contacts on the Atlantic Seaboard in the 5th to 7th centuries AD*. Oxford.
- Eger, Christopher. 2010. "Byzantine dress accessories in North Africa: koiné and regionality." In *Intelligible Beauty, Recent research on Byzantine jewellery*, edited by Noël Adams, Christopher Entwistle, 133–140. London.
- Entwistle, Christopher and Adams, Noël, eds. 2010. *Intelligible Beauty, Recent research on Byzantine jewellery*. London.
- Evans, Helen C. ed. 2015. *Age of Transition. Byzantine Culture in the Islamic World*. New York.
- Foss, Clive. 1976. *Byzantine and Turkish Sardis*. London.
- Fulford, Michael G. 1989. "Byzantium and Britain: a Mediterranean perspective on Post-Roman Imports in Western Britain and Ireland." *Medieval Archaeology* XXXIII: 1–6.
- Gaglione, Mario. 2014. "Amalfi e Napoli tra alto medioevo ed età angioina." In *Interscambi socio-culturali ed economici fra le città marinare d'Italia e l'Occidente dagli osservatori mediterranei, Atti del Convegno Internazionale di Studi in memoria di Ezio Falcone (1938–2011)*, edited by Bruno Figliuolo and Pinuccia Franca Simbula, 33–69. Amalfi.

- Gelichi, Sauro, Calaon, Diego, Grandi, Elena and Negrelli, Claudio. 2012. "History of a forgotten town: Comacchio and its archaeology." In *From one sea to another. Trading places in the European and Mediterranean Early Middle Ages*, edited by Roger Hodge and Sauro Gelichi, 169–205. Turnhout.
- Gelichi, Sauro, Molinari, Alessandra (eds). 2018. *I contenitori da trasporto alto-medievali e medievali (VIII-XII secolo). Centri produttori, contenuti, reti di scambio*, *Archeologia Medievale* XLV.
- Hadad, Shulamit. 2002. *The oil lamps from the Hebrew University excavations at Beth Shean*. Jerusalem.
- Haldon, John. 2002. "Some Aspects of Early Byzantine Arms and Armour." In *A Companion to Medieval Arms and Armour*, edited by David. C. Nicolle, 65–79. Woodbridge.
- Haldon, John. 2016. *The Empire That Would Not Die: The Paradox of Eastern Roman Survival, 640–740*. Cambridge/London.
- Hamilakis, Yannis. 2013. *Archaeology and the Senses. Human Experience, Memory and Affect*. Cambridge.
- Hanse, Inge L., Hodges, Richard and Leppard, Sarah, eds. 2013. *Butrint 4. The archaeology and histories of an Ionian Town*. Oxford/Philadelphia.
- Harper, Kyle. 2017. *The fate of Rome. Climate, disease and the end of an Empire*. Princeton.
- Harris, Anthea, ed. 2007. *Incipient globalization? Long-distance contacts in the sixth century*. Oxford.
- Hayes, John W. 1992. *Excavations at Saraçhane in Istanbul*. Vol. 2, *The pottery*. Washington DC.
- Hodges, Richard. 2012. "Adriatic Sea trade in an European perspective." In *From one sea to another. Trading places in the European and Mediterranean Early Middle Ages*, edited by Sauro Gelichi and Richard Hodges, 207–234. Turnhout.
- Hodges, Richard and Leppard, Sarah. 2011. "The First and Second Collective Workshops." In *San Vincenzo Maggiore and its Workshops*, edited by Richard Hodges, Sarah Leppard and John Mitchell, 157–193. London.
- Horde, Peregrine and Purcell, Nicholas. 2000. *The Corrupting Sea. A Study of Mediterranean History*. Oxford.
- James, Simon. 1988. "The *Fabricae*: State Arms Factories of the Later Roman Empire." In *Military Equipment and the Identity of Roman Soldiers*, edited by Jonathan C. Coulston, 257–331. Oxford.
- Jennings, Sarah. 2010. "A group of glass ca. 800 A.D. from Tower 2 on the Western Defences, Butrint, Albania." In *Glass in Byzantium: Production, Usage, Analyses*, edited by Jörg Drauschke and Daniel Keller, 225–235. Mainz.
- Jennings, Sarah, Stark, Karen. 2013. "Appendix: The glass from Tower 1 in the Western Defences." In *Butrint 4: The Archaeology and Histories of an Ionian Town*, edited by Richard Hodges, Sarah Leppard, Inge L. Hansen, 275–259. Oxford /Philadelphia.
- Jones, Arnold H.M. 1964. *The Later Roman Empire, 284–602: a social, economic and administrative survey*. Oxford.
- Keller, Daniel, Price, Jennifer and Jackson, Caroline. 2014. *Neighbours and Successors of Rome: Traditions of glass production and use in Europe and the Middle East in the Later 1st Millennium AD*. Oxford/Philadelphia.
- Kylander, Malin E., Weiss, Dominik J., Martinez Cortizas, Antonio, Spiro, Baruch, Garcia-Sanchez, Raquel and Coles, Barry J. 2005. "Refining the pre-industrial atmospheric Pb isotope evolution curve in Europe using an 8000 year old peat core from NW Spain." *Earth and Planetary Science Letters* 240: 467–485
- Laïou, Angeliki and Morrisson, Cécile. 2007. *The Byzantine Economy*. Cambridge.

- Langó, Péter. 2010. "Crescent-shaped Earrings with Lower Ornamental Band." In *Byzanz – das Römerreich im Mittelalter*, Teil 3, edited by Falko Daim and Jörg Drauschke, 369–410. Mainz.
- La Salvia, Vasco. 2015. "Impianti metallurgici tardo antichi ed alto medievali a Roma. Alcune riflessioni tecnologiche e storico-economiche a partire dai recenti rinvenimenti archeologici a Piazza della Madonna di Loreto." In *L'archeologia della produzione a Roma (secoli V-XV)*, Atti del Convegno Internazionale di Studi. Roma 27–29 marzo 2014. Collection de l'École Française de Rome, 516, edited by Alessandra Molinari, Riccardo Santangeli Valenzani and Lucrezia Spera, 253–277. Bari.
- Leo Imperiale, Marco. 2003. "Struttura e tecnologia delle fornaci da vasaio di età bizantina ad Otranto (LE)." In *III Congresso Nazionale di Archeologia Medievale*, 674–677. Firenze.
- Leo Imperiale, Marco. 2004. "Otranto, cantiere Mitello: un centro produttivo nel mediterraneo bizantino. Note intorno ad alcune forme ceramiche di fabbricazione locale." In *La ceramica altomedievale in Italia*, edited by Stella Patitucci Uggieri, 327–342. Firenze.
- Lightfoot, Chris. 2007. "Trade and Industry in Byzantine Anatolia: The Evidence from Amorium." *Dumbarton Oaks Papers* 61: 169–186.
- Lightfoot, Chris. 2014. "Learning and Literacy at Byzantine Amorium." In *Arkeolojiyle Geçen Bir Yaşam İçin Yazılar. Veli Sevin'e Armağan. SCRIPTA. Essays in Honour of Veli Sevin. A Life Immersed in Archaeology*, edited by Aynur Özfirat, 381–386. Istanbul.
- Lopez, Robert S. 1957. "The Role of Trade in the Economic Readjustment of Byzantium in the Seventh Century." *Dumbarton Oaks Papers* 13: 67–85.
- McCormick, Michael. 2001. *Origins of the European Economy. Communications and Commerce, A.D. 300–900*. Cambridge.
- Metaxas, Susanne. 2008. "Paolo Orsis Beitrag zur Kenntnis der byzantinischen Alltagskultur." In *Junge Römer – Neue Griechen. Eine byzantinische Melange aus Wien Beiträge von Absolventinnen und Absolventen des Instituts für Byzantinistik und Neogräzistik der Universität Wien*, in *Dankbarkeit gewidmet ihren Lehren Wolfram Hörander, Johannes Koder, Otto Kresten und Werner Seibt als Festgabe zum 65. Geburtstag*, edited by Mihailo Popovic and Johannes Preiser-Kapeller, 129–139. Wien.
- Metaxas, Susanne. 2009. *Die Materielle Kultur des byzantinischen Sizilien (6. – 10. Jahrhundert)*, PhD dissertation, Universität Wien.
- Metaxas, Susanne. 2012. "Byzantinische Gürtelschnallen mit D-förmigem, gravurverziertem Scharnierbeschlag aus Sizilien, Eine Untersuchung zu ihren Trägern und zur lokalen Gürtelmode." *Jahrbuch der österreichischen Byzantinistik* 62: 81–102.
- Molinari, Alessandra. 2015. "La produzione artigianale a Roma tra V e XV secolo. Riflessioni sui risultati di uno studio archeologico sistematico e comparativo." *L'archeologia della produzione a Roma (secoli V-XV)*, Atti del Convegno Internazionale di Studi. Roma 27–29 marzo 2014, ColLEFR 516, edited by Alessandra Molinari, Riccardo Santangeli Valenzani and Lucrezia Spera, 613–635. Bari.
- Molinari, Alessandra, Santangeli Valenzani, Riccardo and Spera, Lucrezia, eds. 2015. *L'archeologia della produzione a Roma (secoli V-XV)*, Atti del Convegno Internazionale di Studi. Roma 27–29 marzo 2014, Collection de l'École Française de Rome, 516. Bari.
- Morrisson, Cécile. 1998. "La Sicile Byzantine: une lueur dans les siècles obscurs." *Quaderni Ticinesi di Numismatica e Antichità Classiche* XXVII: 307–334.
- Morrisson, Cécile. 2012. "Introduction." In *Trade and Markets in Byzantium*, edited by Cécile Morisson, 1–19. Washington DC.
- Mundell Mango, Marlia. 2009. "Byzantine trade: local, regional, interregional and international." In *Byzantine Trade, 4th-12th Centuries: The Archaeology of Local, Regional and International Exchange*, edited by Marlia Mundell Mango, 1–14. Oxford.

- Neri, Elisabetta. 2016. *Tessellata vitrea tardantichi e altomedievali: produzione dei materiali e loro messa in opera. Considerazioni generali e studio dei casi milanesi*. Turnhout.
- Oikonomides, Nicolas. 2002. "The Role of the Byzantine State in the Economy." In *The Economic History of Byzantium: From the Seventh through the Fifteenth Century*, edited by Angeliki E. Laiou, 973–1058. Washington DC.
- Orsi, Paolo. 1942. *Sicilia bizantina*. Catania.
- Papadopoulou, Pagona. 2012. "The numismatic evidence from the southern Adriatic (5th–11th centuries): some preliminary observations and thoughts." In *From one sea to another. Trading places in the European and Mediterranean Early Middle ages: Proceedings of the International Conference, Comacchio 27th–29th March 2009*, edited by Sauro Gelichi and Richard Hodges, 297–320. Turnhout.
- Peacock, David P.S. 1982. *Ceramics in the Roman world, an ethnoarchaeological approach*. London/New York.
- Pitarakis, Brigitte. 2006. *Les croix-reliquaires pectorales byzantines en bronze*. Paris.
- Poblome, Jeoren. 2004. "Comparing ordinary craft production: textile and pottery production in Roman Asia Minor." *Journal of the Economic and Social History of the Orient* 47, 4: 491–506.
- Pohl, Meinrad. 2011. "Querns as markers for the determination of Medieval northern European trade spheres." In *Bread for the people: The Archaeology of Mills and Milling Proceedings of a colloquium held in the British School at Rome 4th–7th November 2009*, edited by David Williams and David Peacock, 169–177. Oxford.
- Putzeys, Toon and Lavan, Luke. 2007. "Commercial space in Late Antiquity." In *Objects in Context, Objects in Use: Material spatiality in Late Antiquity*, edited by Luke Lavan, Ellen Swifr and Toon Putzeys, 81–109. Leiden.
- Rautman, Marcus. 1998. "Hand-made pottery and social change: The view from Late Roman Cyprus." *Journal of Mediterranean Archaeology* 11: 81–104.
- Ricci, Marco. 2001. "La produzione di merci di lusso e di prestigio a Roma da Giustiniano a Carlomagno." In *Roma dall'antichità al medioevo. La storia, in Roma dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Saguì and Laura Venditelli, 79–87. Milano.
- Rierner, Ellen. 2000. *Romanische Grabfunde des 5.-8. Jahrhunderts in Italien*. Rahaden.
- Rodziewicz, Elzbieta. 2009. "Ivory, bone, glass and other production at Alexandria, 5th–9th centuries." In *Byzantine Trade (4th – 12th centuries): Recent Archaeology of Local, Regional and International Exchange*, edited by Marlia Mundell Mango, 83–96. Aldershot.
- Romei, Diletta. 2004. "Produzione e circolazione dei manufatti ceramici a Roma nell'alto medioevo." In *Roma dall'antichità al medioevo*, Vol II. *Contesti tardoantichi e altomedievali* edited by Lidia Paroli and Laura Venditelli. Milano.
- Roth, Helmut. 1980. "Almandinhandel und verarbeitung im Bereich des Mittelmeeres." *Allgemeine und Vergleichende Archäologie, Beiträge* 2: 309–335.
- Saguì, Lucia. 2007. "Glass in late antiquity: the continuity of technology and sources of supply." In *Technology in Transition A.D. 300–650*, edited by Luke Lavan, Enrico Zanini, and Alexander Sarantis, 211–31. Leiden-Boston.
- Scheidel, Walter. 2009. "In search of Roman economic growth." *Journal of Roman Archaeology* 22: 46–70.
- Schibille, Nadine. 2017. "Glass supply and glass working at Labraunda." *Anatolia Antiqua* XXV: 223–226.
- Schulze-Dörlamm, Mechthild. 2009. *Byzantinische Gürtelschnallen und Gürtelbeschlüge im Römisch-Germanischen Zentralmuseum, Teil II. Die Schnallen mit Scharnierbeschlüg und die Schnallen mit Angegossenem Riemendurchzug des 7. bis 10. Jahrhunderts*. Mainz.

- Sessa, Kristina. 2019. "The New Environmental Fall of Rome: A Methodological Consideration." *Journal of Late Antiquity* 12.1: 211–255.
- Sogliani, Francesca. 2010. "Testimonianze dell'officina tardoantica e altomedievale." In *Napoli la città e il mare: Piazza Bovio tra romani e bizantini*, edited by Daniela Giampaola, 87–89. Verona.
- Soricelli, Gianluca, Grifa, Celestino and Morra, Vincenzo. 2012. "Macine altomedievali da Alife." In *Civitas aliphana. Alife e il suo territorio nel medioevo*, Atti del Convegno (Alife, 19–20 gennaio 2013), edited by Federico Marazzi, 217–224. Modugno.
- Stern, Marianne 2012, "Early Byzantine Glass from Athens (5th–8th centuries)." In *Byzantine Small Finds in Archaeological Contexts*. BYZAS 15, edited by Beate Böhlendorf-Arslan and Alessandra Ricci. 49–60. Istanbul.
- Thomas, Cornwall. 1988. "The context of Tintagel. A new model for the diffusion of post-Roman Mediterranean imports." *Cornish Archaeology* 27: 7–25.
- Uboldi, Marina. 2009. "Lo sviluppo del calice altomedievale con elementi "a colonnine" tra gambo e coppa." *Quaderni Friulani di Archeologia*, XIX: 221–228.
- Vaccaro, Emanuele and Francesco La Torre, Gioacchino. 2015. "La produzione di ceramica a *Philosophiana* (Sicilia centrale) nella media età bizantina: metodi di indagine ed implicazioni economiche." *Archeologia Medievale* XLII: 53–91.
- van Alfen, Peter G. 1996. "New light on the 7th-c. Yassi Ada shipwreck: capacities and standard sizes of LRA1 amphoras." *Journal of Roman Archaeology* 9: 189–213.
- Vassiliou, Anastasia. 2016. "Middle Byzantine chafing dishes from Argolis." *Deltion of the Christian Archaeological Society*, ser. 4, 37: 251–275.
- Volpe, Giuliano, Turchiano, Maria, De Venuto, Giovanni and Goffredo, Roberto. 2012. "L'insediamento altomedievale di Faragola: dinamiche insediative, assetti economici e cultura materiale tra VII e IX secolo." In *La trasformazione del mondo romano e le grandi migrazioni. Nuovi popoli dall'Europa settentrionale e centro-orientale alle coste del Mediterraneo*. Atti del Convegno internazionale di studi Cimitile-Santa Maria Capua Vetere, 16–17 giugno 2011, edited by Carlo Ebanista and Marcello Rotili, 239–263. Cimitile.
- Vroom, Joanita. 2009. "Medieval Ceramics and the Archaeology of Consumption in Eastern Anatolia." In *Archaeology of the Countryside in Medieval Anatolia*, Pihans 113, edited by Tasha Vorderstrasse and Jacob Roodenberg. 235–258. Leiden.
- Vroom, Joanita. 2012. "From one Coast to Another. Early medieval ceramics in the southern Adriatic region." In *From one sea to another. Trading places in the European and Mediterranean Early Middle ages: Proceedings of the International Conference, Comacchio 27th-29th March 2009*, edited by Sauro Gelichi and Richard Hodges, 353–391. Turnhout.
- Ward-Perkins, Bryan. 2005, *The Fall of Rome and the End of Civilization*. Oxford.
- Wickham, Chris. 2005. *Framing the early Middle Ages, Europe and the Mediterranean, 400–800*. Oxford.
- Wright, George R.H. 2000, "Some Byzantine Bronze Objects from Beycesultan." *Anatolian Studies* 50: 159–170.
- Zanini, Enrico. 1998. *Le Italie Bizantine. Territorio, insediamenti ed economia nella provincia bizantina d'Italia (VI-VIII secolo)*. Bari.
- Zanini, Enrico. 2006. "Artisans and Traders in the Early Byzantine City: Exploring the limits of archaeological evidence." In *Social and Political Life in Late Antiquity*, edited by William Bowden, Adam Gutteridge and Carlos Machado, 373–411. Leiden.
- Zavagno, Luca. 2017. *Cyprus between Late Antiquity and the Early Middle Ages (ca. 600–800). An Island in transition*. London/New York.

Glenn Peers

2 Late Antique Making and Wonder

Abstract: This article examines materials, processes and meanings of late antique making. Often denigrated as craft, work accomplished through materials, such as reeds, marble and bronze, reveals deep relations of late antique Christians with their world. It demonstrates that bodies think through materials and show their rich attachments to divinity through making. Revision of objects, carved and cast, can also allow new arguments to emerge through engagement with prior craft. Wonder and awe inspired by the splendid making of that world, is examined for ways it expresses understandings of being alive in a world likewise made and alive. The Shield of Achilles is a remarkable *topos* for tracking those understandings, and late antique *homerica* reveal particular explanations for (literally) vivid craft. In these ways, this article argues for a re-evaluation of late antique working in and understandings of matter, stuff, craft – and ultimately God’s redemptive involvement, too.

I enter into this discussion with the fear that appropriate modesty causes. Treating craft in the late antique world, let alone the Middle Ages, is a humbling enterprise, not any less for the company, for Anthony Cutler has for over twenty years been examining, with typical vigor and incisiveness, just these issues of maker, making and made – to provide a cognate-filled triad that covers the range of craft’s life. He has presented compelling arguments and careful analyses, and he has treated that life-range of objects, without neglecting the thing at the center of craft’s process.¹

Cutler discussed the “shadow cast by a higher plane” onto late antique craft, that is, the way craft became simply a way of arguing on a symbolic level at the expense of making itself.² While engaging that symbolic world craft encourages, I will argue

¹ Some of Anthony Cutler’s work on the subject is listed in the bibliography. On craft’s conception and realities, see the useful historical studies of Magoulias 1976, Burford 1998, 186–200, Sparkes 1998, Morel 1993, 214–44, and Burford 1972, 184–218.

² Cutler 1997, 971.

Note: An early version of this paper was presented at a conference organized by Salvatore Cosentino called “Ravenna and the Traditions of Late Antique and Early Byzantine Craftsmanship: Labor, Culture and Economy,” and held at the Italian Academy at Columbia University, New York, in March 2013. My thanks to everyone who made that conference possible and who made the event so stimulating. This essay was finished while I was a senior fellow at the Internationales Kolleg für Kulturtechnikforschung und Medienphilosophie, Bauhaus-Universität Weimar. I would also thank my friend and colleague Nassos Papalexandrou for his kind advice, and acknowledge guidance and suggestions from other colleagues: David Armstrong, Christoph Eggersgluß, and T’ai Smith. Finally, deep thanks for many years of mentoring and support to Antony Cutler. A version of this essay appears in my *Animism, Materiality and Museums: How Do Byzantine Things Feel?*

for directing that plane back, in a sense, on the things themselves. By looking closely at the things and their processes in Late Antiquity, I want to argue for the hand making a world in its thinking and practice that are cognates of divine, world-making skills. Even if writers did not articulate that animating process always as such, craft skills – like metal-casting, painting and ceramics – *made* worlds, small and large, and they extended their agency, their material thinking, into a world constantly filled and re-filled with new versions of world-making things.³

Taking this position means pushing back against a deeply held bias in our culture, for the priority of interior thinking and against thinking with the body.⁴ For example, in an article published in *The New Yorker*, a test for Parkinson's overtly privileged unseen thought as a sign of mental well-being, when the author attempted to experiment by moving objects around before submitting his answer. He was told, "Putting action before thinking is the kind of error you made. You did something and then thought about it. That's less efficient and less elegant than planning a strategy."⁵ Of course, the statement cannot be validated, and many of us would not support such a position on principle, but the statement constitutes a diagnosis and carries serious weight for human subjects.

In modernism, that emphasis on innate abilities and intellectual inspiration is fundamental to our value-judgments of made things, namely art. The debate begins, perhaps, with Goethe and Schiller on dilettantism in 1799 – does a real artist, as opposed to an amateur, need more than genius (whatever that is)? In the 20th century, modernism went strongly toward 'genius,' because the hands of the real artist were guided by idea, concept, inspiration, at the expense of skill, technique, material knowledge. To take just one example, the German painter and teacher Willi Baumeister (1889–1955) wrote that genius is not taught, has no experience, or standard; modern art emancipates us from training or vocation.⁶ In terms laid out by Gilbert Ryle (1900–76), for example, we value museum knowledge over instrumental knowledge,⁷ or the elegance and efficiency of the thinking over the same qualities in the doing. These positions have a long history, beyond modernism, but bias against making and craft – hand-thinking – is still a prevalent mode of explaining our relation to the material world.⁸

3 Bray 2015 makes a case for her artistic practice as anthropological research in which a portrait gets "more intimate, truthful and 'thick' than were it to have been done in just a few hours." So, artistic practice learns and discloses essential truths about humans, in this approach, like it can about materials and materiality.

4 See, for instance, Adamson 2007, for a carefully reasoned response.

5 Kinsley 2014, 30.

6 Baumeister 1947, 124–5.

7 Ryle 1971, II: 212–25 (originally published 1946). See also Polanyi 1974, 92.

8 See Mark 1995, but also Auther 2010.

So, I am reacting to the weight and value, as I perceive them, of previous positions in the history of art. In the first place, my insistence on relation among all these agents – makers, things and users – comes from recent work in anthropology, that allows me to argue for a world livelier than we admit normally for our historical subjects and for ourselves.⁹ In this way, craft's self-knowing process, a doing that thinks, rather than relying on rote learning and repetition, is a way into arguing for an extended mind that things bring into the world.¹⁰ I posit an effective persuasion that craft can carry out in the world; its thinking, formed but not determined by the maker, is in force and difficult to resist. I want to address aspects of revision and renovation that also implicate issues of 'distributed authorship,' in which objects carry marks of multiple traces of renovation and re-making.¹¹

Finally, I want to focus on wonder, sensations of perplexity and astonishment that made things cause, as a way of approaching cultural models of makers, and the effects and lives of the things they make. The Shield of Achilles in Archaic and Classical Greece provides incentive to think about the play of that model of craftsman (Hephaestus), commissioner (Thetis) and circles of recipients (among whom: Achilles, the Myrmidons, Greeks, and all the strata of readers of the *Iliad*) extended into Late Antiquity. The uncertainties of wonder, its displacements, fear and attraction, are means by which craftsmen and craft extend their reach out into their world and put all their agencies into play.

Craft Hands

The lives of almost all of the women and men who performed any kind of specialized work in Late Antiquity are invisible to us now. Representations like this example of a Late Roman sarcophagus show some of the *realia* of a studio, one supposes.¹² But of course this image is not transparent to process.¹³ Indeed, many representations of craftsmen – even if done by craftsmen, as they invariably were – reveal very little that we can see about the realities and processes of craft that are *self-reflective*. They are commissioned and interpreted for their symbolic, referential value. For example, at the other end of Late Antiquity, the images of craftsmen in the painted program of the

⁹ For example, this pithy statement with tremendous potential: Conneller 2011, 20, "Becomings always exist in relation to something else (becoming-animal, becoming-stone)."

¹⁰ For example, see Descola 2013, Descola 2010, Marchand 2010, Ingold 2001, and essays in Rose & Rose 2000.

¹¹ I also want to argue for a kind of social idealism around craft, which is often the case for writers on craftsmen in the modern world. I take Richard Sennett's model of social cohesion that arises from practicing craft to be very stimulating. See Sennett 2012.

¹² Lazaridou 2011, 62.

¹³ On this issue, see Lehmann 2012.

desert palace Qusayr ‘Amra (Jordan, early 8th century) are not autobiographical in a transparent way, but highly determined by the overall demands of the program in that set of rooms.¹⁴ In other words, craftsmen most often describe themselves through their work and its outcomes, not by representational self-portraits.

Yet the sarcophagus, again, shows a pondering painter, his materials, and the results of thought-filled process.¹⁵ The material results of that work, which is craft, tells us almost all we can know about the skills and knowledge of those workers or craftsmen. They scarcely reveal aspects of craftsmen’s beliefs or aspirations in ways that we can understand. But made-things can demonstrate how craftsmen used their work to gain the world a thing, a “letting-appear,” that confirmed, extended and amplified their agency.¹⁶ For example, Karl Marx (1818–83) made this point of working on and with the world as a full reciprocity, “By thus acting on the eternal world and changing it, [man] at the same time changes himself.” His examples of making are about loss of will and subordination, but I will not admit alienation is part of the process I am describing. For Marx, the spider and bee are supreme crafts-beings because they do not have an ideal form imposed on them for production – they do not have need to impose preformed images from their head directly on the world.¹⁷

Insisting on the skill of late antique craftsmen runs against certain official expressions that survive in hagiographies and theological texts. Church officials, priests, bishops and saints alike, revealed their suspicion of the independent hands of craftsmen, and they were often, at least in public pronouncements, willing to denigrate or neutralize that potential of unchecked power makers and their things had.¹⁸ For example, an episode in the hagiography of Symeon the Younger (ca. 600) reveals an attempt on the part of the saint to dispense craft skill to a young man who wishes to become a sculptor.¹⁹ The saint touched the chest of the young man in order to give him the inspiration and skill that God would provide. The gesture is almost romantic, in the sense of a generalized, transforming touch of the whole body; so it is not placing a hand on the head, the place of intellect, nor taking the man by the hand, where the wished-for skill would begin its world-changing. The saint channeled skill and

¹⁴ See Fowden 2004, 215–6, and see Maranci 2015, 146–56, on portraits of workers and their crafts at Qusayr ‘Amra.

¹⁵ See Dormer 1994, 14, “Tacit knowledge refers to a body of knowledge which we have gained through experience – both through the experience of the senses and through the experience of doing work of various kinds. Tacit knowledge differs from propositional knowledge in that it cannot easily be articulated or described in words.”

¹⁶ I take the “letting-appear,” or “Erscheinenlassen” from Martin Heidegger (1889–1976); in his essay “Bauen Wohnen Denken,” he described ‘techne’ as a dynamic process of bringing into being, rather than a stamp of mind on world. See Heidegger 2000, 161; Heidegger 1971, 159.

¹⁷ Marx 1962, IV: 178; Marx 1957, I: 169–70.

¹⁸ I make this case for Late Antiquity and Iconoclasm in Peers 2012b.

¹⁹ “Vita S. Symeonis Stylitae Iunioris,” in *Acta Sanctorum*, 24 Maii, *: 349 [417B-C (14)].

inspiration, the apprentice accepted that hierarchy of craft, and presumably – according to the text – the sculpture was acceptable to the church. And yet this institutionally idealized process cannot be ‘real,’ for sculptors – then, as now – learned their craft through watching, doing, working with and against materials, in the usual ways craft is acquired and enacts.

World-Making Basket

My point is that humans and materials work together in a mutually enlivening process, of more or less ability or interest in self-articulation on the part of either. As Chris Gosden has recently written, “Artifacts do not reflect intellectual schemes, but help to create and shape them.”²⁰ Basket weaving is an excellent example of this process, and as an ancient art, with not much technological change over millennia and with global applications, it allows us to see how weavers still manipulate raw materials into new, practical, pleasing objects. And yet weavers, like all craftsmen, do not impose an order or image; they must work with and on the material, just as the material works with and on them.²¹ Moreover, the work is not simply performed by a person emptied of mind and initiative, fully trained to produce in rote; it does not eliminate creativity and free expression, because materials always insist on their equal role.

Baskets survive from the late antique period, mainly from Egypt, and anthropological work in that country also reveals essential features of making.²² The craft depends on intense concentration and full-bodied engagement with materials.²³ But this precious equilibrium between attention to materials and application of acquired knowledge is also seen in other contexts, like modern workshops, in which highly developed skill is self-maintained at great cost in a battle to ensure quality and output.²⁴ Basket making is likewise improvisational to some extent, while maintaining a need for results. That is a little obvious maybe, but the point is that, unlike mechanical production, handicraft is process, and the environmental, material elements matter as much as the skill and strength of the maker. Where one makes a basket, indoors or outdoors, with a firm set or handheld, with resistant strands or pliant, all these are participants with maker in a process that does not need, maybe cannot have, a predetermined outcome. Moreover, baskets have no frame, no inside or outside, because wrapping

²⁰ Gosden 2013, 39.

²¹ On this process, see Ingold 2011, and also Ingold & Lucas 2007, 296–8.

²² See Wright 1959, Colt 1962, 59–60, and Wendrich 1999.

²³ In ways that reveal perhaps some of the tensions that Marx saw leading to alienation in modern workers.

²⁴ Dormer 1994, 40–1.

transverse fibers make them alternately inside and outside.²⁵ That organic quality makes it sometimes difficult to know when a basket is finished, though when it is finished, it can last a very long time. The basket then emerges in a mutual agreement through an interaction of skilled action and materials, and repetitive, attentive action makes the resultant thing regular and complete.

The acquisition and development of such skills is a social activity, naturally, and in this world, they took place in workshops within master-apprentice frameworks. The mosaicists in the apse at San Vitale worked in tandem, beginning in the middle of the apse, for example, and worked outward from that point; constant communication, mutual realization and result matching must have taken place in that creative process.²⁶ That type of craft-learning then could not really be called independent, nor is it a fully integrated activity shared between teacher and pupil. It leads by example, in fact, to another kind of knowledge that has been called a “material consciousness,” that is, a way of knowing that develops through sensitive, attentive familiarity with materials.²⁷ This kind of knowledge operates, perhaps, as a basis for a “dialogic social behavior,”²⁸ and if that is so, it comes out of those particular master-apprentice and maker-material relationships. Beyond the social ramifications, that set of relationships enlarges the maker’s experience and knowledge of the world. As Peter Dormer (1949–96) wrote, “Craft knowledge is genuine knowledge. To possess it in any form is to see the world in an enriched way compared with someone who does not possess it.”²⁹ Anna Odland Portisch tells a story about a craftswoman in Kazakhstan who constantly eyed and coveted her niece’s new outfit, until she could manage to persuade the girl to relinquish it, so that she could make a wall hanging from the yarn.³⁰ Perhaps not the most likeable example one could adduce, but this story reveals the particular acuity with which craftsmen look at the world, not as a passive field, but as a realm for creative engagement and fashioning.

In that sense, baskets are both the result of a set of actions between maker and materials, and answering a vast number of needs in the world for containing, storage and transport. The objects themselves are modest, almost unremarkable, but they are found in a large number of contexts and in endless forms and sizes. Domestic and ecclesiastic uses are obvious, but their adaptability is remarkable, such as being used as insulating shutters in late antique houses in Egypt.³¹ Holding and containing are natural uses to which these things have always been put, but they have added valences

²⁵ Ingold 2000, 55.

²⁶ See Andreescu-Treadgold 1992, 34.

²⁷ See Venkatesan 2010.

²⁸ Sennett 2012, 199–220; 2008.

²⁹ Dormer 1994, 68. Kentridge 2014, is very rich in such observations on practice, perhaps most movingly on drawing as negotiation with the world.

³⁰ Portisch 2010.

³¹ See Dauterman Maguire/ Maguire/Flowers 1989, 89–90.

when they are represented in late antique art as sources of bounty. So, for example, at Sant'Apollinare Nuovo in Ravenna, baskets (among other things) contain the bounty of paradise, and in other scenes, like the Miracle of the Loaves and Fishes, they are vessels of miraculous plenitude.

The Stuff of Making

These modest things, then, are impressive distillations of the dynamic relationship among makers and materials, of the work that happens in the flows of matter and attentive, evolving, reactive skill, by which thing and maker reciprocally emerge. This model, in general terms, applies equally well to humble objects like baskets as it does to elevated categories like metal working, bronze casting, mosaic and painting.³² Just as all these categories of making belong to a more undifferentiated group of activities than they do for us and our fine art traditions, so all these ways of making take part in this same cooperative world-making actions and energies.

Can worked materials and the artisan's work form and change how we understand nature or life? And can the raw materials themselves also determine a craftsman's approach, experience and outcome?³³ Such questions have a history, and materials are not absolute in the world, because they have explanations and functions, of course, that change with period and culture.³⁴ So, engaging in a kind of materialist iconology can open up some of the ways materials and their worked states participate in a world-defining process.³⁵ How one explains the materiality of reeds and twigs, for example, might be one way into the inherent meaning of their worked forms.

Likewise, to travel to the other end of the spectrum of material values, how one explains the meaning of gold as mineral and medium should tell us a great deal about what the material and resultant thing *did* in its culture.³⁶ So, this small gold box in the Menil Collection does a great deal still, but it does more when its material explanations are examined and its worked qualities are explored (Fig. 1).³⁷ Only in this way can we approach the particular work the material and its partnering maker

³² On that categorization, see, for example, Scott 2006, Olson 2005, and Lapatin 2003.

³³ See Bensaude-Vincent /Newman 2007, 9, and Cutler 2011, 186.

³⁴ An important offshoot of material-culture studies needs to be noted here, because it examines the interplay between matter and form, but gives significant credit to the *Stoffe* or basic substances of making and life (and social effects). See Boscagli 2014, Espahangizi/Orland 2014, Hahn 2014, and Naumann/Strässle /Torra-Mattenklott 2006.

³⁵ See Zaunschirm 2012.

³⁶ Beer 1983.

³⁷ This box figured in an exhibition at the Menil Collection in summer 2013 and in the accompanying volume, Peers 2013, and see also Peers 2012b.



Fig. 1: Gold box, 6th/7th century. The Menil Collection (x 819), with permission of The Menil Collection, Houston, TX.

did, and how that thing went to work in its world. The box is small scale, and I want to talk about wonder and the miniature, too, but in the first place, I want to address briefly what gold did in Late Antiquity. By its doing, I mean the explanations that culture had for its materiality.

That understanding goes back at least to Classical antiquity, and it strikingly undermines our understanding of materials as inert. The geology is based on mixtures of elements, and most metals were thought to be primarily water-based, that is, water trapped in the earth and hardened into metals like gold and silver. This elemental combining then is an animating force in the earth, rather like a vital force that runs through creation, like a life-blood. Aristotle (384–22 B.C.E.) spoke of the spirit in the moisture within the earth that combined with life-heat to produce these metals. In some way that Aristotle could not explain, that combination charged the materials with soul, “In earth and in water, life occurs, and plants through the water in the earth appear, and in the water is spirit, and in everything the soul life-heat is present, so that in this way all things are full of soul.”³⁸ If the world has soul, it also has feelings, and Pliny the Elder (23–79) describes the earth trembling in indignation at the rapaciousness of humanity; we would be better off if we had never broken

³⁸ *De generatione animalium*, III.xi (762a). See also Theophrastus (371–287 B.C.E.) 1956, 19 (1). Likewise, gems are created through various actions in the environment, most importantly celestial bodies like the sun and moon, but also climatic conditions, like heat and cold. See Halleux 1981, 50–1, on theories of Poseidonius (ca. 135–51 B.C.E.), for example. And for miraculous, or otherwise inexplicable, generation, see Epstein 2012, and Van Der Lugt 2004.

ground and had never succumbed to the greed for what lies under earth's skin.³⁹ These general notions are basic to a material iconology, and they can be applied across a wide chronological range, because they continued to be in play well into the Renaissance, as Michael Cole has shown in his work on Benvenuto Cellini (1500–71).⁴⁰

That play of spirit in matter is an essential part of the iconology of matter in that world, and it also affects the resultant forms, like this box, and its functions. In that sense, the watery nature of gold is part of the enlivening action apparent from careful attention to the box itself – perhaps better, from careful imagination, because to perform this action is to forget the ways most of us encounter such things, as well-lit objects in museum cases.⁴¹ After something is made, the materials remain, and they continue to do things, like in this box, to shimmer and to halate in weak light, to disappear to luster in stronger light, to vacillate between elemental states apparently even as it glosses and maintains its natural, lambent substantiality. The limitations and expansions of life, one might say, are the subject of something like this mere box. The box cannot hide its history as water and earth, ensouled by geological process, and it adapts its nature to the ways the maker forms it. The dappling and denting, its uneven surfaces, are the result of handicraft, not machine work obviously, and the necessary way maker and materials worked through the sheeting's irregularities demonstrate the box's faceted reflecting and absorbing light. Seeing these aspects, imagining them as it were, means working against our own experiences, not just those determined by museums, and re-examining senses and relation to the natural world.

In the work of artists like Yves Klein (1928–62), Robert Rauschenberg (1925–2008) and James Lee Byers (1932–77), gold is the matter at hand.⁴² Klein's *Monogold* series reveals the instability and partial quality of our perception of gold; it always shifts and changes, moves from gold to silver, reflects and absorbs, shows its environment back, while staying aloof from it (Fig. 2). These qualities are useful to observe and describe, because they are inherent to gold as matter and apply equally well in principle to the late antique box. But we are minimalists at heart, and we know the gold is just gold.⁴³ For people who made and witnessed the gold box in Late Antiquity, gold was more than the itself that we give it. Gold was a divine material that demonstrated in its birth, making and its made state, the wonder of the world that can contain and recapitulate divine truths and presence.

³⁹ Pliny the Elder, *Naturalis historia*, 33.I.

⁴⁰ Cole 2011, and Cole 2002.

⁴¹ See Greenblatt 1990.

⁴² The artists are included not only because of their mutual interest in working with and through gold, but also because their artworks were included in Peers 2013 and are discussed in the exhibition volume. For a comparable exploration, see Dupré et al. 2014.

⁴³ Analogies with modernist approaches to gold are suggestive for understanding the divergent materialities at work. For the modern position, see the useful essay by Gehring 2012.



Fig. 2: Yves Klein, *Untitled (Monogold)*, 1960, 199.4 x 153 x 2. Gold leaf on primed board. The Menil Collection (82–61 D), with permission of The Menil Collection, Houston, TX.

Emergent meaning in craft made the divine immanent, and craftsmen's knowledge and experience of the world were instrumental in this process.⁴⁴ But that reality is worth stating, because it asserts the distance between a theory of practice *and* activities based in practice and experience in a craft. It is the difference between reading a language with a dictionary and actually manipulating all potentialities of a language in its diverse forms – or, coming close to home, like writing about painting versus painting.⁴⁵ Separating the makers and users into a teleological relationship where the makers gave the box over after having done their separate work is probably false. Different agents played on the making and use of the box, in all likelihood, from the conception of a container, through its making and then birth into the world – and then its long life, which shows on the gold skin's marking. Its affordances, then, were the results of

⁴⁴ Ludwig Wittgenstein was dealing with linguistic determinism, that words have a meaning but also a *work*, and in this way, he indicated an obvious craft reality, "To understand a sentence means to understand a language. To understand a language means to master a technique." See Wittgenstein 1958, 81 (199).

⁴⁵ See Keller 2001, on the divergences in perceptions of an activity between practitioner and spectator, master and novice.

various actors at play, not least the materials themselves, and meaning was distributed amongst and by them.⁴⁶

Our mastery of materials made into things is an easy illusion – let alone the things that result – but anyone who has worked by hand on wood or metal realizes that one is necessarily in a compromising position before materials.⁴⁷ The gold painting series by Robert Rauschenberg abounds in certain ironies about this sense of mastery (Fig. 3). Of course, he was a maker revealing his making at every turn, despite his denial of art as such, and he certainly played with the arbitrariness of process and the visual interest and pleasure that could result. In this series, he applied gold leaf to fabric or cardboard, and allowed the qualities of gold as glowing surface to emerge when it wanted to, as it were, and the surface qualities of the support, fabric etc., when it could. The subject is the gold and what it does, according to certain, varying aspects of his practice. Here materials and hands work together without forethought, but full of process-thought.⁴⁸

I am arguing that the gold in the late antique gold box does more because it was allowed to perform beyond its surface (where Rauschenberg stayed so productively). While still significant, surface is just the place for late antique craftsmen, and anyone else in that culture, to find the different meanings, if not also the wonder, of the divine. Transmutable matter moves towards gold always, naturally, just as human nature moves towards the divine. Gold is that perfect condition of salvation.⁴⁹ For that reason, one of the first acts performed by Adam and Eve after tilling the soil was setting up a forge; they were crafting redemption.⁵⁰ Labor and making were basic ways heirs of Adam's fault could find a return to divine likeness.⁵¹ On the one hand, pseudo-Macarius

⁴⁶ See Knappett 2004, 43–51, and Knappett 2005. For convenience, I offer this definition of affordance from the OED, “A characteristic of an object, esp. relating to its potential utility, which can be inferred from visual or other perceptual signals; (more widely) a quality or utility which is readily apparent or available.”

⁴⁷ Warnier 2001, 8–9, and Latour 2007, 74–5, on *homo faber* as *homo fable*, “I never act, but I am always surprised by what I do. That which is acting through me is also surprised by what I do, by the occasion offered to mutate and change and bifurcate that which is offered, by me and by the circumstances surrounding me, to that which has been invited, recovered, welcomed.” And moreover Gordon 1979, 21, “In the products both of ordinary labour and of the artist, conception is translated into artifact, into an object, which exists independently of those intentions. An idea is concretized, but in such a way that the object transcends the idea: the object does not merely ‘betray’ the intention which formed it, but provides the objective basis for further acts of signification. Its meaning is no longer confined to the intention of the maker, which has no special privilege and may, in a given society, have no privilege at all.”

⁴⁸ Here, I would note diverse examples of things making arguments and, moreover, demonstrating them non-verbally and materially. See Haug 2014, Kessler 2012, and Faraone 2011.

⁴⁹ See Mertens 2004, and Peers forthcoming.

⁵⁰ See the tenth-century ivory in the Castello Sforzesco, Milan, for example, in Dupré 2014, 12, and Daim 2010, 198.

⁵¹ Ballan 2011.



Fig. 3: Robert Rauschenberg, *Untitled (Gold Painting)*, 1956, 10 1/2 x 10 7/8 x 1 1/2 inches. Gold leaf, wood fabric, and cardboard in wood and glass frame. The Menil Collection (98-001), with permission of The Menil Collection, Houston, TX.

(ca. 400) wrote about Christian self-fashioning being comparable to a portrait-maker capturing a likeness (in this case, a Christian studying the face of Christ); and on the other hand, and in a less metaphorical sense of craft, Egyptian monks wove reeds into mats while in communal prayer and reading.⁵² Handiwork accompanied the making of salvation and guided hand, and thus soul, back to the divine.⁵³

The shape of the object, with its lid and receptacle, its box-ness, recalls sarcophagi and reliquaries, and so death; it too was connected with death, in its likely use as a reliquary.⁵⁴ In that way, moving from its utility as container and object of beauty and wonder, the box also travels from craft to art; as it withdraws in its role as holder of divine substance, it becomes the precious miniature that gives sacred death emotional resonance.⁵⁵ In this world, death was in life, and vice versa, and the box's material performance made that death dramatically, physically alive to one – all the while showing the animate, perdurant metal-life of the made thing. Gold is untarnishable, seemingly permanent in its conditions, and its deathless life is a perfect surround for sacred relics. That surplus or excess is the place where enlivened material is made

⁵² Peers 2004, and Zanetti / Davis 2016, and Veilleux 1968, 307 and 309 n. 142.

⁵³ As painters, moreover, performed acts of piety through their active practice. See Limberis 2011, 53–96, and Webb 2007.

⁵⁴ This indexical evocation is skeuomorphism, according to Knappett 2002, 108–110.

⁵⁵ Olson 2005, 327. See, also, Kohring 2011.

dynamically active in the world by knowing hands of its maker.⁵⁶ Indeed, gold's material transcendence paradoxically foregrounds the madeness, the process by which it came into this being.⁵⁷

Craft-Life of Things

At variance with the notion of authority in modernism,⁵⁸ craft presupposes distribution of authorship across makers who work together and also through time. In his stimulating book, *Medieval Modern*, Alexander Nagel glances at mosaic through the lens of the interest of Marshal McLuhan (1911–80) in Byzantium.⁵⁹ In striking ways, McLuhan's notion of authority, Nagel argues, approaches medieval notions, "Authorship before print was to a large degree the building of a mosaic." Mosaic then has long life in part because of the durability of the materials, but also because of the ongoing work of restoration that takes place on these fields. In effect, mosaics reveal an unstable set of practices with open, distributed authorship, where revision and restoration are the means by which things survive.

Craft is clearly in play when mosaic fields are being made and mended, however successful we consider the result, or however much we devalue the intervention at all. When interventions occur in painting or sculpture, we are almost always disappointed. The interference by Medicean painters in the Rabbula Gospels (Florence, Biblioteca Mediceo Laurenziana, cod. Plut. I, 56) was not a positive addition, for example, and discovering those Renaissance alterations to the sixth-century manuscript took a surprising amount of time.⁶⁰ The sculptor – if he deserves the name (I grant him the privilege at least) – re-carved a face in the 5th or 6th century evidently to remake a face into a human-cross composite. Such a move is related to the work of the carver who incised the cross on another late antique head.⁶¹ The former is certainly engaged in a stronger statement and with more skill than the latter. But is that a qualitative distinction that matters? This act of replacing face with cross is brutal on one level, but perhaps one could also see this alteration as a way for an argument to be

⁵⁶ So, I am arguing against the excellent, but to my mind limiting, argument in Schwarz 2012.

⁵⁷ Conneller 2011, 13, provides a useful corrective for going too far to materials' side. ". . . at times, materials do seem more important in the generation of an artifact and the affects it may come to have; at other times, materials' properties are subsumed, transformed or transcended in the making of an object. As a result, a meta-theory where things are always animate only by virtue of their materials does not allow us to conceptualize the variability of past interactions."

⁵⁸ No matter how hard Rauschenberg fought 'art', he was still Rauschenberg.

⁵⁹ Nagel 2012, 159.

⁶⁰ Bernabò 2008. And see Heilmeyer 2004, 409, on remaking of bronze in the Renaissance, too.

⁶¹ Drandaki/Papanikola/Tourta 2013, 60, and Lazaridou 2011, 147–148, and see Kristensen 2012, who stresses purification.

made about the indelibility of the cross in all reality. Justin Martyr in the 2nd century was already making claims that the cross is like a Christian DNA that was only visible after the Incarnation and Crucifixion.⁶² Then we can know that all of reality is composed of this ‘building block of life.’ While unsubtle, this face clearly comprises the cross, that meeting of brow and nose that is one of the crosses embedded in the surface of our bodies. The victory stamp of cross and inscription demonstrates its reality in the partition of a human face into Christian quadrants.⁶³ Here certainly is an unstable set of practices that served to reveal skeleton and leave flesh, and both authors retain some claim to copyright here.

This bronze figurine of Dionysus likewise had its active life extended by craftsmen separated by centuries.⁶⁴ Cast in the 2nd/3rd century, it was once more elaborate than it is now, in the sense that peg holes reveal it also had a wreath and a cloak (and of course all four members), but toward the end of our period of concern, a new craftsman approached the object and revised it for new work. That new work was perhaps twofold: the presentation of Psalm 29: 3 (RSV: “The voice of the Lord is upon the waters; the God of glory thunders, the Lord, upon many waters.”) as a belt resting on the hips of the god. The text begins to the right of a cross, which rests midway between navel and genitals; it does not follow the same sinuous curve of the hips, but its straight lines only serve to accentuate that sensuous s-pose of the god. If that cross might be said to be trying too hard, then the cross-shaped monograms on chest and thighs also work at sealing and inoculating.

I want to give proper credit to the person who performed these revisions, because to my mind, they are very sensitive to combining what might seem the incommensurable of sacred and sensual. And belief in innate qualities of material that relate to purity/impurity was also in play as the story related in the seventh-century *Vita* of Theodore of Sykeon indicates; a chalice and paten set was given by a deacon, but the saint perceived its taint, in its previous use in a profane context. In this version – textual naturally – once form is impressed, matter is marked, and the objects were refused. But this statuette obviously did not partake of the same unforgiving text-world analysis that Theodore directed at that silver.⁶⁵

The statuette is a telling example of an object that was determined to retain essential aspects of its original make-up, while operating as something quite different

⁶² See Peers 2004.

⁶³ Face is an essential, and under-studied aspect of late antique self-understandings. See for example, the theologian Evagrius (345–399) wrote, “So just as the mind receives the mental representations of all sensible objects, in this way it receives also that of its own organism – for this too is sensible – but of course with the exception of one’s face, for it is incapable of creating a form of this within itself since it has never seen itself” [*On Thoughts* 25]. See Casiday 2013, 170, on the assimilative power of faces for Christian and Christ.

⁶⁴ Cutler 2013, 172, and Althaus/Sutcliffe 2006, 50, 86, 171. On medieval revisions, see Cutler 2011 and Cutler 2010.

⁶⁵ Festugière 1970, I: 36–8 (42).

at the same time. Irony has to be playing a role here, too, for that Psalm passage was also used at Epiphany for blessing the waters. The head too underwent revision, and it was opened at the crown to provide room for a small receptacle to hold, perhaps, oil or water or wine – something precious at least. One can certainly wish to know more about this piece (its context is not clear since it was found in the Don River in 1867), but the distribution of craft authorship over the surface and its interior is worth noting. While the cloak was likely missing by the time the revisions were made, the craftsman was evidently sensitive to the material qualities of the bronze and respected them to the degree of addressing the contours and surfaces of the figure, in a way that the sculptors who intervened in the marble female heads did not.

Bronze casting, materials and process, have a long and fascinating history, from Pliny's description in the *Natural History*, where he ascribed its invention to Hephaestus, to the Italian Renaissance, when the self-heroizing narrative of Cellini kept stakes at an Olympian height.⁶⁶ I cannot absolutely establish the connections, but I want to indicate the possibilities for bronze and casting in the late antique world that might have influenced choices made by the craftsman at updating and intensifying this statuette's work. Writers had long used bronze casting as a means to comprehend drawing order out of chaos, for world-making, and moreover, making humanity out of earth was also explored as a natural, even divine, precedent to this craft. The molten material used in casting was sometimes, evocatively but also in some sense literally, like blood.⁶⁷ Minerals and ores are like earth's blood, if not precisely, but blood is in the earth, and like blood does in this world, it becomes other things while retaining its nature. Hematite, for example, is obviously a bloody remnant in the earth, congealed somehow and transformed into a precious stone.⁶⁸ And if blood could be stone, the reverse was logically possible. Eusebius of Caesarea (ca. 263–339) tells of marble columns sympathetically weeping blood before the terrible martyrdom of Ennatha in 308; the stoas were forever stained, because they refused to relinquish their bloody witness. Moreover, the streets were wetted from no other sources than the secreting flagstone, and many stones wept real salty tears.

⁶⁶ See Grammacchini 1987, 163–4.

⁶⁷ Galen (129–ca. 200), *Peri physikon dynameon*, II.iii.83; *On the Natural Faculties*, trans. Arthur John Brock, London-New York, 1916, 131, “But nature does not preserve the original character of any kind of matter; if she did so, then all parts of the animal would be blood – that blood, namely, which flows to the semen from the impregnated female and which is, so to speak, is like the statuary's wax, a single uniform matter, subjected to the artificer. From this blood there arises no part of the animal which is as red and moist [as blood is], for bone artery, vein, nerve, cartilage, fat, gland, membrane, and marrow are not blood, though they arise from it.”

⁶⁸ Theophrastus, *On Stones*, 19 (37).

Their flesh suffered with her flesh.⁶⁹ (I am not claiming this as fact, only that stones always had the potential in this world for secretion, transformation and acting.)⁷⁰

Blood was also a highly changeable material, altering according to conditions to breast milk and sperm, for example, and as a constituent material of all life, it also extended itself into the natural world again, for example as honey, all the more powerful because it is an excretion by bees, but incorruptible. Paradoxically, honey is like breast milk, though milk is a secretion, and yet both are almost miraculous nutrients.⁷¹ Milk, however, loses its life the farther and longer it goes from the secreting body, and it becomes dangerous under those circumstances.⁷² Honey has an enduring quality that appears nearly out from under constraints of time and space, like milk is, and it is closest to ambrosia in this world.⁷³ Blood, tears, milk all saturated the environment, throughout antiquity and into the Byzantine period, and while their outward forms changed, the vivid viscousness flowed all through the landscape.⁷⁴

I am trying to suggest here some of the things bronze was in that world, along with other cognate phenomena that have, of course, very different meanings for us. I can indicate then some of these lexical cognates: blood was another constituent material in the world that carried with it animation as an enspiriting, enlivening element.⁷⁵ The miracle and wonder of this element are fantastic, and they likewise need to inform our view of how bronze and its working were understood in the world from extraordinary skill to world-making in its formation and renovation. Bronze workers into the Renaissance were fashioning life out of raw matter in ways God himself modeled, and they performed his acts again in the creation of form and in the infusion of forms with vivacity (literally) that made real and present the latent life of materials. This notion of God as first and perfect artist played a role in these conceptions of craft. According to Romanus the Melode in the 6th century, potting is God's act of creation of humanity, and Christ's blood was ink for writing;

⁶⁹ See, generally, the tremendous work of Silverman 2009, but also Morel 1998, 43–85, specifically on the self-production of images in nature.

⁷⁰ Cureton 1861, 33–4 (Syr. 35), “The atmosphere was perfectly calm and clear, when, all on a sudden, many of the columns of the porticos in the city emitted spots as it were of blood, while the market-places and the streets became sprinkled and wet as with water, although not a single drop had fallen from the heavens. And it was declared by the mouth of every one, that the stones shed tears and the ground wept; for even the senseless stones and the ground without feeling could not endure this foul and barbarous deed; and that the blood which flowed from the stones, and the earth which without any rain emitted as it were tears from its body, rebuked all these godless folk.” And Bardy 1967, 151 [in the Greek version, just tears]. See Patrich 2011, 269–70.

⁷¹ See Tétart 2004.

⁷² Orland 2010.

⁷³ Tétart 2004, 89.

⁷⁴ Buxton 2009, 191–230.

⁷⁵ See the tradition, too, that the Trojan Horse needed to bleed in order to convince the Trojans. See Burgess 2011, 211 n. 18.

in these instances, the divine is not only the maker but also the means of making. The Mandylion, Christ's miraculous self-portrait produced by his own blood (or sweat), is perhaps the very best example of God taking in hand the accuracy of his own portrait; it even had the extended agency of God in making versions of itself and acted on its own.⁷⁶

Matter can be its own self-crafter, too, so deeply is this vivacity of making woven into the world by God. Stones again have marvelous power, as Philostratus said, one of which is to give birth.⁷⁷ That ability is an outcome perhaps of their gendering, apparent by observing different colors of the same stone.⁷⁸ Precious stones not only regenerated themselves, but as animate things, they also could demonstrate theology.⁷⁹ Gregory of Tours (538–94) related the story of three drops falling to form a gem that demonstrated orthodox thinking on the Trinity,

While the drops were spinning in an indeterminate circle over the altar, they flowed unto the paten and immediately fused together, as if they formed one extremely beautiful gem. By an obvious deduction it was evident that this had taken place in opposition to the evil heresy of Arianism, which was hateful to God and which was spreading at that time.⁸⁰

No other agency than matter itself is stated by Gregory; evidently water-before-gem thought out the act, planned the right moment and made evident to human bystanders what it intended. Indeed, cognitive mind is not necessary for thought or intentionality, as biologists and philosophers would claim.⁸¹

The Wonder of Craft

Wonder arises not only from materials, but also from intricate work, from miniature fine-work, and from the monumental – from every made thing out of our control. The wonder of the Shield of Achilles from book 19 of the *Iliad* is the first and greatest of such object emotions. Hephaestus with his robot maidens crafted the peerless shield, and to see it, as the poet did, is the wonder. Wonder or *thavma* is the uncanny animation of the shield itself. We are prepared for it by his robot apprentices, but nothing can fully cushion the blow of that incredible excess Homer relates. The *thavma* is, on one level, an aesthetic pleasure to be had from encountering a work

⁷⁶ Grosdidier de Matons 1964, 33.10.6, and Peers 2004. Further on blood in western Christianity, see Jansen/Dresen 2012, and Fricke 2013.

⁷⁷ Theophrastus, *On Stones*, 19 (5).

⁷⁸ Theophrastus, *On Stones*, 23–4 (30–31).

⁷⁹ See, for example, Gaifman 2008, 37–72.

⁸⁰ Krusch 1885/1969, 496.24–7 [12]; trans. Van Dam 1998, 33.

⁸¹ See Turner 2007. From that point of view, the Trinitarian drops-to-gem of Gregory of Tours was a dramatic, theologically-oriented recapitulation of geological process.

of art, but the power to evoke wonder is not in mimesis, in capturing an evocation of life, but in the very ability of a made thing to produce life out of materials that may have seemed simply inert, inactivated.⁸² In the shield is contained an impossible world, of course, and its manifold operations (including, at the end, craftsmen like architect and potter, and maybe a bard, who all do their work) are a real *mise en abyme*. And that self-sustaining generation of life within the ekphrasis is noted several times: the prediction by Hephaestus that before the shield all will marvel (18.467), and women within the scenes did (18.496), and the ploughed fields were the greatest marvel for they turned the gold black, as they overcame their own materials (18.548–9).⁸³ Homer's privileged vision mediates world and our imagination, and effects compound so that the description constantly shifts between real and poem in a way that is very difficult to disentangle.⁸⁴

The history of reading of this Homeric ekphrasis traces understandings of central understandings of craft, materials, and even life itself. Some viewers within the shield itself are caught in moments of awe and wonder, before their crafted landscape and their very ability to be in such a living, crafted landscape, it would seem. But the witnesses of the shield, within the *Iliad*, are not so many, so we are led in other ways to understand how we should see and experience this made world. In book 19 (14–19), Achilles's mother delivers the armor, and the Myrmidons are fearful and look away.⁸⁵ The surfeit produced by Hephaestus's craft is not for everyone. Achilles himself experiences a range of reactions, from anger that blazes forth like flames, and then he lapses into gladness and delight.⁸⁶ This ekphrastic rendering of wonder was, of course, immensely influential throughout antiquity and into the period of Late Antiquity and up to the present day. How late antique poets took up the challenge of the shield is revealing of attitudes toward made things.⁸⁷ Achilles's elite, controlled viewing may have been a model in archaic and classical Greece, but it no longer applied in Late Antiquity. Hephaestus however is still heroic, an unattainable paragon of craftsman, who continues to stir wonder in those who experience his craft.

In Quintus Smyrnaeus's *Posthomerica* from the 3rd century, the shield is full once again of "countless other scenes upon the shield, artfully wrought by the

⁸² de Jong 2011.

⁸³ See Cullhed 2014, Squire 2011, and Kokolakis 1980.

⁸⁴ Squire 2011, 337.

⁸⁵ See also Sprague Becker 1995, 29–30, on Aelion Theon (1st century), who presented the armor as positive for allies and as fearful for enemies.

⁸⁶ Only then can he speak after he has travelled that emotional path to acceptance – and then his murderous mission. Achilles's vision is privileged, possessing, and it denies any easy access to that made, living world. See Papalexandrou 2011.

⁸⁷ The conditions under which figures encounters their miraculous artifacts are also telling of attitudinal changes. Achilles and the Myrmidons do not figure as exemplars in the examples of *homerica* I briefly discuss, and book 19 is the least attested in surviving papyri of the poem, so its popularity seems to have passed in this period. See Criore 2001, 194.

deathless hands of cunning Hephaestus.”⁸⁸ Quintus stressed the lifelikeness in a way that emphasizes also the poet’s mediation; the shield here has been made, as we are not witnessing Hephaestus himself, and the life is in Quintus’s own craft, one might say.⁸⁹ Quintus underlines the importance of ‘know-how’ when he describes Odysseus winning the armor from Ajax: *metis* is the key, the knowledge that is superior in performing every task.⁹⁰ The armor is lying on the floor before the competitors and judge on a sixth-century silver plate, and Ajax stands erect and principled, while Odysseus hunches over, his entire body entering the quarrel and channeling his powerful *metis*. Quintus has Odysseus laud the know-how of men, the intelligence of men who are able to overcome and tame the world (5.247–52). This championing of will and skills in human activities presents the very best model for the enrichment of the world that experienced doing produces.⁹¹

Ekphrasis is consistently dealing in verbal control of visual experience, and that trait is marked in late antique examples of the treatment of Homer’s shield. Late antique writers on contemporary and still-extant monuments give some sense of a related, but not direct emulation of that great paradigm of poetic wonder. Quintus again picked up the Homeric topos, when Odysseus gives the armor of Achilles to the rightful owner, Achilles’s son Neoptolemus,

[Hephaestus took delight in making] those immortal things, which will be a great wonder to you as you look upon them, because the land and heaven and sea are artistically worked here and there on the shield, and creatures in a boundless circle are fashioned all around – they look as though they are moving, a wonder even to the immortals (7.200-4).

The wonder appears when Neoptolemus dons the armor, mounts his father’s horses, and appears divine to those around him, as Deiphobus reacts in the poem – as we do, too.⁹²

That oscillation between the real, made thing and the impossibility of its madeness brought about wonder, perplexity, fear and joy. In literary terms, the issue was never resolved through Late Antiquity, or in Byzantine writers either. Procopius of Gaza (ca.465–528), for example, wrote about a marvelous water clock, and his point of comparison at the outset is naturally Hephaestus and the shield, as well as Alcinous’s dogs.⁹³

⁸⁸ 5.97–8; James 2004, 82. And see Baumbach 2007.

⁸⁹ See Maciver 2012, 45–46.

⁹⁰ 7.200–4, Maciver 2012, 54.

⁹¹ In Nonnos of Panopolis (active first half of 5th century), *Dionysiaca*, the god is on campaign in India when the shield is delivered, unexpected and unmotivated – a clear case of Homeric emulation. See Hopkinson 1994, 23, Vian 1990, 33–42 and 260–262, and also Vian 1991. The shield is described at some length (25.384–567) as the richly wrought, cunning work of the god (383–384; *polydaidalon, sophon ergon*). The book ends with all gathered around and praising the fiery forge of Hephaestus.

⁹² Maciver 2012, 52, on 9.230–46, and 5.220–1, “The heavenly armor that covers the breast of the god resounds and flashes as brightly as fire.”

⁹³ Amato 2010, 204–212, here 204.

Through the unity of his mind and body, and through his sure action in gold and silver, Hephaestus made the handicraft as good as alive. Contemporary know-how is just as demanding of wonder, according to Procopius, and indeed it is not fiction, like Homer produced. The irresolution of the animate qualities, however, of both past and current examples of extraordinary crafting, gave that wonder its piquancy and allowed the animate quality of made things to simmer, percolate and erupt into experience for Procopius's audience, for example.

Sixth-century descriptions of Hagia Sophia even more powerfully evoke both the overwhelming madeness of everything *and* more-than-made plenitude, its excessive quality surpassing human skill *and* making it a heaven and earth.⁹⁴ In these descriptions, wonder is also evoked and programming our own reaction: for Paul the Silentiary (d. 575/80), the wonder is never-ceasing, and his prose travels the heights of Hagia Sophia to make it so.⁹⁵ Describing the crafting of this wonder intensifies the experience: the mason “weaved together with his hands” the slabs of marble that produced effects of fruits on boughs, vines and wreaths, in other words confounded orders of existence in making plant and stone indistinguishable.⁹⁶ Procopius of Caesarea (ca. 500–65) likewise emphasized his sense of wonder: “spectacle of great beauty, stupendous to those who see it and altogether incredible to those who hear of it”⁹⁷ It possesses “ineffable beauty,” to the degree that the wonder of the place is simply impenetrable. God’s richly wrought craft is at work here, “No matter how much they concentrate their attention on this side and that, and examine everything with contracted eyebrows, they are unable to understand the craftsmanship and always depart from there amazed by the perplexing spectacle.”⁹⁸ The inevitable sense of perceptual shortcoming before this monument is perhaps shared by all who visit Hagia Sophia, though few would express that impression like Paul or Procopius did. Wonder for them, as it was for much of the Middle Ages and Early Modern period, was a *cognitive emotion*, a mixture of thought and feeling that is unsettling, irresolvable. The boundaries between the possible and impossible, made and not made, in other words the boundaries that craft breaches sometimes, undermine their categories of the world.⁹⁹

Late antique *thavma* was expansive to all senses, and it was not restricted to that one sense, of sight, but extended across all ways of knowing the world through bodies. That relation of bodies to work was in Achilles’s Shield and in other *Homerica* of Late Antiquity, and it was in that church, but it was also in the mere, in baskets and

⁹⁴ On a parallel track, see Tanner 2013.

⁹⁵ De Stefani 2011, 28.398–29.416; trans. Mango 1986, 82.

⁹⁶ De Stefani 2011, 44.647–45.663; trans. Mango 1986, 86. On stone and metaphor, see Kiilerich 2012.

⁹⁷ De Stefani 2011, I.i.27; trans. Mango 1986, 72–74.

⁹⁸ De Stefani 2011, I.i.49; trans. Mango 1986, 75.

⁹⁹ On these ideas, see Daston & Park 1998, 14.

boxes. It was in remade marble faces and in bronze flesh. Our bodies make judgments of scale, and the enormity of the church and tininess of the gold box both tell us what human bodies can do.¹⁰⁰ They especially tell us what we did not know bodies could do until we witnessed them, and then miraculous making shocks our world. The thinking hand of the craftsman is in and motivating all these phenomena. The making of small, gold reliquaries, for example, reveals in careful looking and imagining more in the object than passive description of the world on the part of the box or its maker. Such objects show that makers and made participated in producing powerful wonder through materials and their formation. Those things are never in one's hands fully, they constantly escape, captivate and make every view of the world wondrous – otherwise, they are false.¹⁰¹

Bibliography

- Adamson, Glenn. 2007. *Thinking through Craft*. Oxford/New York.
- Althaus, Frank and Sutcliffe Mark, eds. 2006. *The Road to Byzantium: Luxury Arts of Antiquity*. London.
- Amato, Eugenio. 2010. *Rose di Gaza: gli scritti retorico-sofistici e le Epistole de Procopio di Gaza*. Alessandria.
- Andreescu-Treadgold, Irina. 1992. "The Mosaic Workshop at San Vitale." In *Mosaici a S. Vitale e altri restauri. Il restauro in situ di mosaici parietali. Atti del Convegno nazionale sul restauro in situ di mosaici parietali Ravenna 1–3 ottobre 1990*, edited by Anna Maria Iannucci, Cesare Fiori, and Cetty Muscolino, 31–41. Ravenna.
- Auther, Elissa. 2010. *String, Felt, Thread: The Hierarchy of Art and Craft in American Art*. Minneapolis.
- Ballan, Joseph. 2011. "Basil of Caesarea on the Ascetic Craft: The Invention of Ascetic Community and the Spiritualization of the Work in the *Asketikon*", *Heythrop Journal* 52: 559–568.
- Bardy, Gustave, ed. 1967. *Peri ton en Palaistinei Martyresanton*, IX.12; *Histoire ecclésiastique, livres VIII-X, et Les Martyrs en Palestine*. Sources Chrétiennes 55. Paris.
- Baumbach, Manuel. 2007. "Die Poetik der Schilde: Form und Funktion von Ekphraseis in den *Posthomerica* des Quintus Smyrnaeus." In *Quintus Smyrnaeus: Transforming Homer in Second Sophistic Epic*, edited by Manuel Baumbach and Silvio Bär, 107–142. Berlin/New York.
- Baumeister, Willi. 1947. *Das Unbekannte in der Kunst*. Stuttgart.
- Becker, Andrew S. 1995. *The Shield of Achilles and the Poetics of Ekphrasis*. Lanham.
- Beer, Ellen J. 1983. "Marginalien zum Thema Goldgrund." *Zeitschrift für Kunstgeschichte* 46.3: 271–286.
- Bensaude-Vincent, Bernadette and Newman, William R. 2007. "Introduction: The Artificial and the Natural: State of the Problem." In *The Artificial and the Natural: An Evolving Polarity*, edited by Bernadette Bensaude-Vincent and William R. Newman, 1–19. Cambridge, Mass./London.

¹⁰⁰ See Mack 2007, 46–57.

¹⁰¹ The last word, as is right, to Walker Bynum 1997.

- Bernabò, Massimo, ed. 2008. *Il Tetravangelo di Rabbula*. Firenze, Biblioteca Medicea Laurenziana, *Plut. 1.56. L'illustrazione del Nuovo Testamento nella Siria del VI secolo*. Roma.
- Boscagli, Maurizia. 2014. *Stuff Theory: Everyday Objects, Radical Materialism*. London.
- Bray, Zoe. 2015. "Anthropology with a Paintbrush; Naturalist-Realist Painting as Thick Description." *Visual Anthropology Review* 31.2: 119–33.
- Burford, Alison. 1972. *Craftsmen in Greek and Roman Society*. London.
- Burford, Alison. 1998. "Trades and Crafts." In *Greek Civilization: An Introduction*, edited by Brian A. Spareks. Oxford/Malden.
- Burgess, Jonathan S. 2011. *The Tradition of the Trojan War in Homer and the Epic Cycle*. Baltimore/London.
- Buxton, Richard G.A. 2009. *Forms of Astonishment: Greek Myths of Metamorphosis*. Oxford/New York.
- Caley, Earle R. and Richards, John C., eds. 1956. *Theophrastus. On Stones*. Columbus.
- Casiday, Augustine. 2013. *Reconstructing the Theology of Evagrius Ponticus: Beyond Heresy*. Cambridge.
- Colt, Harris D. 1962. *Excavations at Nessana (Auja Hafir, Palestine)*. Vol. 1. London.
- Conneller, Chantal. 2011. *An Archaeology of Materials: Substantial Transformations in Early Prehistoric Europe*. New York.
- Cole, Michael W. 2002. *Cellini and the Principles of Sculpture*. Cambridge.
- Cole, Michael W. 2011. "The Cult of Materials." In *Revival and Invention: Sculpture through its Material Histories*, edited by Sébastien Clerbois and Martina Droth, 1–15. Oxford.
- Criatore, Raffaella. 2001. *Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt*. Princeton/Oxford.
- Cullhed, Eric. 2014. "Movement and Sound on the Shield of Achilles in Ancient Exegesis." *Greek, Roman and Byzantine Studies* 54: 192–219.
- Cureton, William, ed. 1861. *History of the Martyrs in Palestine by Eusebius, Bishop of Caesarea, Discovered in a Very Ancient Syriac Manuscript*. London.
- Cutler, Anthony. 1994. *The Hand of the Master: Craftsmanship, Ivory, and Society in Byzantium (9th–11th Centuries)*. Princeton.
- Cutler, Anthony. 1997. "The Right Hand's Cunning: Craftsmanship and the Demand for Art in Late Antiquity and the Early Middle Ages." *Speculum* 72: 971–994.
- Cutler, Anthony. 2002. "The Industries of Art." In *The Economic History of Byzantium from the Seventh through the Fifteenth Century*, Vol.3., edited by Angeliki E. Laiou, vol. II, 555–587. Washington, D.C.
- Cutler, Anthony. 2010. "Makers and Users." In *A Companion to Byzantium*, edited by Liz James, 301–312. Malden.
- Cutler, Anthony. 2011. "Carving, Recarving, and Forgery: Working Ivory in the Tenth and Twentieth Centuries." *West 86th. A Journal of Decorative Arts, Design History, and Material Culture* 18.2: 182–195.
- Cutler, Anthony. 2013. "Byzantium and the Art of Antiquity." In *Heaven and Earth: Art of Byzantium from Greek Collections*, edited by Anastasia Drandaki, Demetria Papanikola and Anastasia Tourta, 166–175. Athens.
- Daim, Falko, ed. 2010. *Byzanz: Pracht und Alltag*. Munich.
- Daston, Lorraine and Park, Katharine. 1998. *Wonders and the Order of Nature 1150–1750*. New York.
- Dauterman Maguire, Eunice, Maguire, Henry and Duncan Flowers, Maggie J. 1989. *Art and Holy Powers in the Early Christian House*. Urbana/Chicago.
- de Jong, Irene J.F. 2011. "The Shield of Achilles: From Metalepsis to *Mise en abyme*." *Ramus* 40.1: 1–14.
- Descola, Philippe, ed. 2010. *La fabrique des images: Visions du monde et formes de la représentation*. Paris.

- Descola, Philippe. 2013. *Beyond Nature and Culture*. Translated by Janet Lloyd. Chicago/London.
- De Stefani, Claudio, ed. 2011. *Paul the Silentiary. Descriptio Sanctae Sophiae. Descriptio ambonis*. Berlin.
- Dormer, Peter. 1994. *The Art of the Maker: Skill and its Meaning in Art, Craft and Design*. London.
- Drandaki, Anastasia, Papanikola, Demetria and Tourta, Anastasia, eds. 2013. *Heaven and Earth: Art of Byzantium from Greek Collections*. Athens.
- Dupré, Sven, von Kerssenbrock-Krosigk, Dedo and Wismer, Beat, eds. 2014. *Kunst und Alchemie: Das Geheimnis der Verwandlung*. Düsseldorf.
- Epstein, Steven A. 2012. *The Medieval Discovery of Nature*. Cambridge.
- Espahangizi, Kijan and Orland, Barbara, eds. 2014. *Stoffe in Bewegung: Beiträge zu einer Wissensgeschichte der materialen Welt*. Zurich/Berlin.
- Faraone, Christopher. 2011. "Text, Image and Medium: The Evolution of Graeco-Roman Magical Gemstones." In *'Gem of Heaven': Recent Research on Engraved Gemstones in Late Antiquity c. AD 200–600*, edited by Chris Entwistle and Noël Adams, 50–61. London 2011.
- Festugière, André-Jean. 1970. *Vie de Théodore de Sykéôn*, 2 vols. Brussels.
- Fowden, Garth. 2004. *Qusayr 'Amra: Art and the Umayyad Elite in Late Antique Syria*. Berkeley.
- Fricke, Beate. 2013. "A Liquid History: Blood and Animation in Late Medieval Art", *Res* 63/64: 53–69.
- Gaifman, Milette. 2008. "The Aniconic Image of the Roman Near East." In *The Variety of Local Religious Life in the Near East in the Hellenistic and Roman Periods*, edited by Ted Kaizer, 37–72. Leiden.
- Gehring, Ulrike. 2012. "The Lustre of Gold: The Self-Staging of a Metal in Art since 1945." In *Gold*, edited by Agnes Husslein-Arco and Thomas Zaunschirm, 70–75. Vienna.
- Gordon, Richard L. 1979. "The Real and the Imaginary: Production and Religion in the Graeco-Roman World." *Art History* 2.1: 5–34.
- Gosden, Chris. 2013. "Technologies of Routine and of Enchantment." In *Distributed Objects: Meaning and Mattering after Alfred Gell*, edited by Liana Chua and Mark Elliott, 39–57. New York/Oxford.
- Grammaccini, Norberto. 1987. "Zur Ikonologie der Bronze im Mittelalter." *Städel-Jahrbuch* 11: 147–170.
- Greenblatt, Stephen. 1990. "Resonance and Wonder." In *Exhibiting Cultures: The Poetics and Politics of Museum Display*, edited by in Ivan Karp and Stephen D. Lavine, 42–56. Washington, D.C./London.
- Grosdidier de Matons, José. 1964. *Romanos le Melode: Hymnes*. Sources Chrétiennes 128. Paris.
- Hahn, Hans P. 2014. *Materielle Kultur: Eine Einführung*. Berlin.
- Halleux, Robert. 1981. *Les alchimistes grecs. Vol. 1. Papyrus de Leyde, Papyrus de Stockholm, Fragments de recettes*. Paris.
- Haug, Henrike. 2014. "Artificial Interventions in the Natural Form of Things: Shared Metallogenetical Concepts of Goldsmiths and Alchemists." In *Laboratories of Art: Alchemy and Art Technology from Antiquity to the Eighteenth Century* (Archimedes 37), edited by Sven Dupré, 79–103. Heidelberg.
- Heidegger, Martin. 1971. *Poetry, Language, Thought*. Translated by Albert Hofstadter. New York.
- Heidegger, Martin. 2000. *Gesamtausgabe. I. Abteilung: Veröffentlichte Schriften 1910–76. Band 7: Vorträge und Aufsätze*. Frankfurt am Main.
- Heilmeyer, Wolf-Dieter. 2004. "Ancient Workshops and Ancient 'Art.'" *Oxford Journal of Archaeology* 23.4: 403–415.
- Hopkinson, Neil. 1994. "Nonnus and Homer." In *Studies in the Dionysiaca of Nonnus*, edited by Neil Hopkinson, 9–42. Cambridge.
- Ingold, Tim. 2000. "Making Culture and Weaving the World." In *Matter, Materiality and Modern Culture*, edited by Paul Graves-Brown, 50–71. London.

- Ingold, Tim. 2001. "Beyond Art and Technology: The Anthropology of Skill." In *Anthropological Perspectives on Technology*, edited by Michael B. Schiffer, 17–31. Dagoon/Albuquerque.
- Ingold, Tim. 2011. *Being Alive: Essays on Movement, Knowledge and Description*. London/New York.
- Ingold, Tim and Lucas, Ray. 2007. "The 4 A's (Anthropology, Archaeology, Art and Architecture): Reflections on a Teaching and Learning Experience." In *Ways of Knowing: Anthropological Approaches to Crafting Experience and Knowledge*, edited by Mark Harris, 287–305. New York/Oxford.
- James, Alan, ed. 2004. *The Trojan Epic: Posthomerica*, Baltimore/London.
- Jansen, Willy and Dresen, Grietje. 2012. "Fluid Matters: Gendering Holy Blood and Holy Milk." In *Things: Religion and the Question of Materiality*, edited by Dick Houtman and Brigit Meyer, 215–231, 435–438. New York.
- Keller, Charles M. 2001. "Thought and Production: Insights of the Practitioner." In *Anthropological Perspectives on Technology*, edited by Michael B. Schiffer, 33–45. Dagoon/Albuquerque.
- Kentridge, William. 2014. *Six Drawing Lessons*. Cambridge/London.
- Kessler, Herbert L. 2012. "'They preach not by speaking out loud but by signifying': Vitreous Arts as Typology." *Gesta* 51.1: 55–70.
- Kiilerich, Bente. 2012. "The Aesthetic Viewing of Marble in Byzantium: From Global Impression to Focal Attention." *Arte medievale* 4.2: 9–28.
- Kinsley, Michael. 2014. "Have You Lost Your Mind? More Bad News for Boomers." *New Yorker* 28 April: 24–31.
- Knappett, Carl. 2002. "Photographs, Skeuomorphs and Marionettes." *Journal of Material Culture* 7.1: 97–117.
- Knappett, Carl. 2004. "The Affordances of Things: A Post-Gibsonian Perspective on the Relationality of Mind and Matter." In *Rethinking Materiality: The Engagement of Mind with the Material World*, edited by Elizabeth DeMarrais, Chris Gosden and Colin Renfrew, 43–51. Cambridge/Oakville.
- Knappett, Carl. 2005. *Thinking Through Material Culture: An Interdisciplinary Perspective*. Philadelphia.
- Kristensen, Troels M. 2012. "Miraculous Bodies: Christian Viewers and the Transformation of 'Pagan' Sculpture in Late Antiquity." In *Patrons and Viewers in Late Antiquity*, edited by Stine Birk and Birte Poulsen, 31–66. Aarhus.
- Kohring, Sheila. 2011. "Bodily Skill and the Aesthetics of Miniaturisation." *Pallas* 86: 31–50.
- Kokolakis, M.M. 1980. "Homeric Animism." *Museum Philologum Londiniense* 4: 89–113.
- Krusch, Bruno, ed. 18885/1969. *Scriptores Rerum Merovingicarum. Tomi I Pars II. Gregori Episcopi Turonensis Miracula et Opera Minora*. Hannover.
- Lapatin, Kenneth. 2003. "The Fate of Plate and Other Precious Materials: Toward a Historiography of Ancient Greek Minor (?) Arts." In *Ancient Art and Its Historiography*, edited by Alice A. Donohue and Mark D. Fullerton, 69–91. Cambridge.
- Latour, Bruno. 2007. "A Few Steps towards an Anthropology of the Iconoclastic Gesture." *Science in Context* 10: 63–83.
- Lazaridou, Anastasia, ed. 2011. *Transition to Christianity: Art of Late Antiquity, 3rd–7th Century AD*. New York.
- Lehmann, Ann-Sophie. 2012. "Showing Making: On Visual Documentation and Creative Practice." *Journal of Modern Craft* 5.1: 9–24.
- Limberis, Vasiliki. 2011. *Architects of Piety: The Cappadocian Fathers and the Cult of Martyrs*. Oxford.
- Maciver, Calum A. 2012. *Quintus Smyrnaeus' Posthomerica: Engaging Homer in Late Antiquity*. Leiden.

- Mack, John. 2007. *The Art of Small Things*. Cambridge.
- Magoulias, Harry J. 1976. "Trades and Crafts in the Sixth and Seventh Centuries as Viewed in the Lives of the Saints." *Byzantinoslavica* 37: 11–35.
- Mango, Cyril. 1986 *The Art of the Byzantine Empire 312–1453*. Toronto.
- Maranci, Christina. 2015. *Vigilant Powers: Three Churches of Early Medieval Armenia*. Turnhout.
- Marchand, Trevor H.J. 2010. "Making Knowledge: Explorations of the Indissoluble Relation between Minds, Bodies, and Environment." *Journal of the Royal Anthropological Institute* 16 (supplement): S1–S21.
- Mark, Ira S. 1995. "The Lure of Philosophy: Craft and Higher Learning in Ancient Greece." In *Polykleitos, the Doryphoros, and Tradition*, edited by Warren G. Moon, 25–37. Madison.
- Marx, Karl. 1962. *Ökonomische Schriften. Ersten Band*. In *Karl-Marx-Ausgabe: Werke, Schriften, Briefe*, 7 vols. in 8 pts., edited by Joachim Lieber. Stuttgart.
- Marx, Karl. 1957. *Capital*, 2 vols., trans. E. Paul and C. Paul. London.
- Mertens, Michèle. 2004. "Graeco-Egyptian Alchemy in Byzantium." In *The Occult Sciences in Byzantium*, edited by Paul Magdalino and Maria Mavroudi, 205–230. Geneva.
- Morel, Philippe. 1993. "The Craftsman." In *The Romans*, trans. L.G. Cochrane, edited by Andrea Giardina, 214–244. Chicago/London.
- Morel, Philippe. 1998. *Les Grottes maniéristes en Italie au XVI^e siècle: Théâtre et alchimie de la nature*. Paris.
- Nagel, Alexander. 2012. *Medieval Modern: Art Out of Time*. New York.
- Naumann, Barbara, Strässle, Thomas and Torra-Mattenklott Caroline, eds. 2006. *Stoffe: Zur Geschichte der Materialität in Künsten und Wissenschaften*. Zurich.
- Olson, Roberta J.M. 2005. "The Transformation of Art and Craft." In *Art for Archaeology's Sake: Material Culture and Style across the Disciplines. Proceedings of the Thirty-third Annual Conference of the Archaeological Association of the University of Calgary*, edited by Andrea Waters-Rist, 325–327. Calgary.
- Orland, Barbara. 2010. "Enlightened Milk: Reshaping a Bodily Substance into a Chemical Object." In *Materials and Expertise in Early Modern Europe: Between Market and Laboratory*, edited by Ursula Klein, 163–198. Chicago/London.
- Papalexandrou, Nassos. 2011. "Vision and Visuality in the Study of Early Greek Religion." In *Current Approaches to Religion in Ancient Greece. Papers Presented at a Symposium at the Swedish Institute at Athens, 17–19 April 2008*, edited by Jenny Wallensten and Matthew Haysom, 253–268. Stockholm.
- Patrich, Joseph. 2011. *Studies in the Archaeology and History of 'Caesarea Maritima': caput Judaeae, metropolis Palaestinae*. Leiden/Boston.
- Peers, Glenn. 2004. *Sacred Shock: Framing Visual Experience in Byzantium*. University Park.
- Peers, Glenn. 2012. "Object Relations: Theorizing the Late Antique Viewer." In *The Oxford Handbook of Late Antiquity*, edited by Scott F. Johnson, 270–293. New York.
- Peers, Glenn. 2012. "Real Living Painting: Quasi-Objects and Dividuation in the Byzantine World." *Religion and the Arts* 16.5: 433–460.
- Peers, Glenn, ed. 2013. *Byzantine Things in the World*. Houston.
- Peers, Glenn. 2015. "Transfiguring Materialities: Relational Abstraction in Byzantium and its Exhibition," *Convivium* 2.2: 112–133.
- Polanyi, Michael. 1974. *Personal Knowledge: Toward a Post-Critical Philosophy*. Chicago.
- Portisch, Anna O. 2010. "The Craft of Skillful Learning: Kazakh Women's Everyday Craft Practices in Western Mongolia." *Journal of the Royal Anthropological Institute* 16 (supplement): S62–S79.
- Rose, Hilary and Rose, Steven, eds. 2000. *Alas, Poor Darwin: Arguments against Evolutionary Psychology*. New York.

- Ryle, Gilbert. 1971. "Knowing How and Knowing That." In *Collected Papers, Volume 2: Collected Essays 1929–1968*, 212–25. London.
- Schwarz, Michael V. 2012. "The Gold Ground in the Middle Ages: 'Don't Ask for the Meaning, Ask for the Use!'" In *Gold*, edited by Agnes Husslein-Arco and Thomas Zaunschirm, 28–37. Vienna.
- Scott, Sarah. 2006. "Art and the Archaeologist." *World Archaeology* 38.4: 628–643.
- Sennett, Richard. 2012. *Together: The Rituals, Pleasures and Politics of Cooperation*. New Haven/London.
- Silverman, Kaja. 2009. *Flesh of My Flesh*. Stanford.
- Sparkes, Brian A. 1998. "Crafts in the Private Sphere." In *Greek Civilization: An Introduction*, edited by Brian A. Sparkes, 216–231. Oxford/Malden.
- Squire, Michael. 2011. *The Iliad in a Nutshell: Visualizing Epic on the Tabulae Iliacae*. Oxford.
- Tanner, Jeremy. 2013. "Figuring Out Death: Sculpture and Agency at the Mausoleum of Halicarnassus and the Tomb of the First Emperor of China." In *Distributed Objects: Meaning and Mattering after Alfred Gell*, edited by Liana Chua and Mark Elliott, 58–87. New York/Oxford.
- Tétart, Gilles. 2004. *Le sang des fleurs: Une anthropologie de l'abeille et du miel*. Paris.
- Turner, J. Scott. 2007. *The Tinkerer's Accomplice: How Design Emerges from Life Itself*. Cambridge/London.
- Van Dam, Raymond. 1998. *Gregory of Tours: Glory of the Martyrs*. Liverpool.
- Van der Lugt, Maaïke. 2004. *Le ver, le démon et la Vierge: Les theories médiévales de la génération extraordinaire*. Paris.
- Veilleux, Armand. 1968. *La liturgie dans le cénobitisme pachômien au quatrième siècle*. Rome.
- Venkatesan, Soumhya. 2010. "Learning to Weave; Weaving to Learn . . . What?" *Journal of the Royal Anthropological Institute* 16 (supplement): S158–S175.
- Vian, Francis. 1990. *Nonnos de Panopolis. Les Dionysiaques. Tome IX. Chants XXV-XXIX*. Paris.
- Vian, Francis. 1991. "Nonno ed Omero." *Koinonia* 15: 5–18.
- Walker Bynum, Caroline. 1997. "Wonder." *American Historical Review* 102.1: 1–26.
- Warnier, Jean Pierre. 2001. "A Praxeological Approach to Subjectivation in a Material World." *Journal of Material Culture* 6: 5–24.
- Webb, Ruth. 2007. "Accomplishing the Picture: Ekphrasis, Mimesis and Martyrdom in Asterios of Amaseia." In *Art and Text in Byzantine Culture*, edited by Liz James, 13–32. Cambridge.
- Wendrich, Willeke. 1999. *The World According to Basketry: An Ethno-archaeological Interpretation of Basketry Production in Egypt*. Leiden.
- Wittgenstein, Ludwig. 1958. *Philosophische Untersuchungen*. New York.
- Wright, Dorothy. 1959. *Baskets and Basketry*. London.
- Zanetti, Ugo and Davis, Stephen J. 2016. "Liturgy and Ritual Practice in the Shenoutean Federation." In *The Red Monastery Church: Beauty and Asceticism in Upper Egypt*, edited by Elisabeth Bolman, 27–35. New Haven/London.
- Zaunschirm, Thomas. 2012. "The Invention of the Gold Ground." In *Gold*, edited by Agnes Husslein-Arco and Thomas Zaunschirm, 10–27. Vienna.

Salvatore Cosentino

3 The Structural Features of Ravenna's Socioeconomic History in Late Antiquity

Abstract: This article discusses the structural elements of Ravenna's society in Late Antiquity, through five key factors, namely: (1) environment and demography; (2) the long-lasting consequences of the establishment in the city of the imperial court; (3) its episcopate; (4) the transformations resulting from the Byzantine conquest of the city in 540; (5) the features, in Ravenna, of an economic organization that we could qualified as a late antique one. In the model of economic operation offered by Ravenna in Late Antiquity, the state played a key role. The city needed to turn to external sources of supply (Istria, Calabria, Sicily, Africa, Greece, Palestine, Syria, Egypt) due to the limited agricultural productivity of its neighbouring areas. Until the end of the 7th century, the port of Class acted as a connecting place of a productive hinterland much larger than Romagna and the Adriatic. In the 8th and 9th centuries the Ravennate episcopate inherited, for certain aspects, the role previously exercised by the state, ensuring wealth to the city thanks to its vast land patrimony. However, unlike Late Antiquity, in the early Middle Ages the economic circuit of Ravenna no longer relied on a large transmarine emporium like Class, but on small fluvial stopovers, inland waterways and land routes. This new reconfiguration formed a more restricted area of exchanges compared to Late Antiquity.

Procopius transmits to us a tradition, hostile to Honorius, which recalls how the emperor abandoned the Milanese palace in order to take refuge in Ravenna after learning the news that the Visigoths of Alaric were in Epirus and marching towards Italy.¹ The transfer certainly occurred between March and 6 December 402.² The idea that it was simply motivated by the greater protective capacity that Ravenna would have offered compared to Milan has been scaled down in recent historiography. It has been pointed out, rightly, that this transfer also matured within the context of an ideological and political competition between Milan and Rome, in which Ravenna played a complementary role to the *Urbs aeterna*.³ Moreover, the displacement of the imperial residence to Ravenna would not have really consecrated the city as capital of the West for much of the 5th century, since from the 440s until 476 almost all emperors still spent long periods of time in Rome, and some of them, like

¹ Procopius, *Bellum Vandalicum* I 2, 9 Haury -Wirth.

² See Neri 1990, 536. In late February 402 Honorius was still in Milan, but on 6 December 402 he issued in Ravenna a law preserved in *CTh* VII 13, 15.

³ Neri 1990, 537–539.

Avitus, never even set foot on Ravennate soil.⁴ It could be added that among the reasons of a non-military nature that would have pushed Honorius to move to Ravenna was the ancient vocation – at least since the age of Emperor Augustus – that the city had played as a rear for the political and military control of Illyricum.⁵ This was an area that at the beginning of the 5th century had been crossed by Gothic military groups and on which the hegemonic aims of the two sons of Theodosius I were clashing at that moment. All these considerations seem convincing arguments that the rise of Ravenna as a new imperial residence of the late Roman West was due to a series of concomitant factors. However, in a contribution that aims towards discussing the elements of the “structure” of Ravennate society in Late Antiquity, the perspective offered by Procopius is useful as it introduces the first of the aspects which I would like to dwell upon, which are as follows: (1) the environment and demography; (2) the long-term consequences of the settlement of the imperial court; (3) the episcopate; (4) the social structure of the city and its labour market; (5) the transformations resulting from the Roman-Eastern conquest of the city in 540; (6) and finally, the peculiarities of a socioeconomic organization in Ravenna that we can qualify as ‘late antique’.

The first aspect, therefore, is the environment and demography. The place chosen by the advisors of Honorius really did have all the characteristics to become a difficult stronghold to conquer. The Roman settlement had developed upon a strip of alluvial plain flanked to the east by the sea, to the west by marshes, to the north by some waterways and to the south by the large port basin which had hosted the *classis Ravennatis*.⁶ This basin in the early 5th century was filled by progressive filling and was only working alongside the original terminal stretch of the port-canal.⁷ When the core of the Roman settlement was surrounded by walls, probably in the first half of the 5th century, it could only be successfully attacked almost exclusively from the south. In fact, there existed just one great arterial road that led to Ravenna, the *via Popilia*, that connected Rimini to Aquileia. This road passed through Ravenna, making it accessible to an army equipped with obsidional machines and a baggage train. There was certainly also a second road that led from Faventia to Ravenna from the west (having its origin in Florence), but it must have been unsuitable for transit by a large number of soldiers and war equipment. It is significant that the funerary areas around the city which have been discovered so far are concentrated particularly northwards and southwards along the *via Popilia*, or eastwards along the original coastline, but not westwards.⁸ The hydrogeological history of Ravenna was characterized by three important phenomena, which have greatly influenced the evolution of

⁴ See Gillett 2001, 131–167, especially 131, 136, 146, Humphries 2012, 161–182, especially 161–162.

⁵ Reddé 2001, 43–45.

⁶ On Ravennate paleo-environment see Fabbri 1990, 7–11.

⁷ Fabbri 1990, 22–25, Fabbri 1991, 19–22.

⁸ See the contribution by D. Ferreri in the present volume.

its habitat. The first and most important, at least for geologists, is the incidence of alluvial processes caused by sediments dragged downstream by rivers and canals. It amplifies a second phenomenon, the subsidence, namely the progressive lowering of the ground due to its constipation by new depositions of debris. The latter, in turn, is made problematic by the existence of a third phenomenon of opposite dynamic, the emergence of groundwater. In brief, the natural environment of Ravenna has been characterized by a great mobility of the geological framework and by an incessant maintenance of it by human activity. Despite the strict relationship with water which constituted a major feature of the cityscape, Ravenna suffered from a lack of water suitable for drinking and social use, as pointed out by Sidonius Apollinaris in his well-known letters of 467.⁹ Emperor Trajan (98–117) is credited with the construction of an aqueduct that originated in Meldola¹⁰; it is not known whether the structure was still working when Honorius arrived, but certainly part of it was restored by Theoderic. In practice, the city's water supply was guaranteed by the excavation of wells, which were numerous inside it and drew water directly from the phreatic layer.

The population density within the 166 hectares enclosed by the city walls is not known.¹¹ Considering that Ravenna was crossed by at least three streams (the Padenna, Flumisello and Lamisa), by different canals, and that the particular fragility of its soil did not allow the construction of large multi-family edifices such as those attested to in Ostia, Rome and Constantinople, this meant the building areas had to be considerably smaller than the space enclosed within the walls. As with the Flemish cities of the early Middle Ages, which developed in a physical environment similar in many respects to that of Ravenna, a population density of less than 100 people per hectare was suggested by Edith Ennen.¹² One can conclude that the living capacity of Ravenna between the 5th and the 6th centuries was around 8,500 people, assuming that at least half of the walled city was urbanised, and using the above-mentioned estimates drawn from the Flemish cities. This order of magnitude is compatible with other demographic estimates elaborated by using other parameters, according to which the conurbation Ravenna – Caesarea – Classe in the Justinianic age had a resident population of about 12,000 people, while at the beginning of the 8th century it would have dropped to around 7,000 people.¹³ Towards 1371, Ravenna

⁹ Sidonius visited Ravenna in 467, leaving us a vivid memory of his stay in two letters addressed respectively to Herennius and Candidianus: see Sidonii Apollinaris *Epistulae*. I 5, 5–6 and I 8, 2–3. On Sidonius' letters see the observations by Mazza 2005, 7–8.

¹⁰ See Maioli 2018, 338–340.

¹¹ Extension of Ravenna in Late Antiquity: Gelichi 2005, 821–840: 830 (the whole walled circuit measured approximately 4.5 km and enclosed an area of about 166 ha); Augenti 2010a, 343–369: 344.

¹² Ennen 1975, 211.

¹³ See Cosentino 2005, 405–435, especially 411–412.

(excluding its suburbs) had 6,100 inhabitants.¹⁴ Based upon the registers of the city parishes dating back to 1585, Dante Bolognesi has estimated that at the end of the 16th century the city was populated by 9,750 people.¹⁵ Adam Smith (1723–1790), in his famous *Inquiry* on how to evaluate the wealth of nations, pointed out as an important parameter the percentage of productive workers out of the total population.¹⁶ If we look at Ravenna under this viewpoint, we realize that it had a very peculiar character compared to other late antique cities. In contrast with Rome, Constantinople or Alexandria, it did not have a numerous urban populace to feed, nor did it host important sanctuaries attracting a huge flow of pilgrims. In late antique Ravenna, the relationship between the residential population and productive population must have been much different from that described by the Dominican theologian Tommaso Campanella (1561–1639) regarding sixteenth-century Naples, in which out of 300,000 inhabitants only 50,000 were active workers.¹⁷ For Ravenna, this percentage must have been much higher in Late Antiquity: instead of 1/6, possibly about 1/3 of its residential population was employed in different segments of the productive cycle. This figure, as we will see later, had repercussions on the overall economic tenor of the city during this period, in particular on its ability to attract capital and on the structure of its labour market as well.

The court settled in an area east of the core of the Roman city. During the first half of the 5th century, Ravenna acquired the aspect of a tetrarchic capital and was endowed with all the buildings and infrastructures that characterized the *sedes regia*: an imperial palace consisting of at least two separate pavilions erected by Honorius and Valentinian III.¹⁸ It was surrounded by walls which according to some scholars were erected between 425 and 455,¹⁹ and it was endowed with a mint and a hippodrome.²⁰ In parallel to the new public monumentalization of the city, there was the first season of great ecclesiastical building with the construction of the Basilica of San Giovanni Evangelista, the church of Santa Croce (both Placidian

¹⁴ Cosentino 2005, 412, fn. 20.

¹⁵ See Bolognesi 1994, 639–640.

¹⁶ Smith 1776, 10–24, 330–349. The *Inquiry* was published in 1776.

¹⁷ Campanella 1944, 39.

¹⁸ Cosentino 2015b, 55–56, with former bibliography on the topic; see also Herrin 2015, 53–62.

¹⁹ This chronology has been proposed by Christie/Gibson 1988, 157–196, esp. 194 followed by Gelichi 2005, 821–840, who, however, thinks that the walls were built with reuse materials (837). Cirelli 2008, 54–67 sides Gelichi's analysis, while Mauskopf Deliyannis 2010, 54 is inclined to think that the walls existed by the very early 5th century. This is the same position held by Fabbri 2004, 34–41, who maintains that Ravenna had an expanded circuit of fortifications since the 4th century – and this would be the reason why Honorius chose the city as a residence.

²⁰ Studies on Ravennate mint in late antique and early Byzantine period: Gorini 1992, 209–238; Arslan 2005, 191–229; Morrisson/Callegher 2014, especially 254–258; Prigent 2016, 151–161. Hippodrome: Vespignani 2005, II, 1133–1142. Mauskopf Deliyannis 2010 is skeptical about the existence of a circus in Ravenna.

foundations), the Basilica Ursiana, and the Orthodox baptistery.²¹ The presence of the palatine administration had as a consequence the revitalization of the port of Classe, which became the commercial hub of the northern Adriatic. The port infrastructures were built substantially along a large waterway that from the open sea penetrated toward the mainland, forming a large port-canal in the middle of which there was an island.²² Storehouses, in many cases with porticoes, stood on each side of that waterway, and were probably also present on both sides of the island located in the middle of it.²³ Towards the beginning of the 5th century, Classe was encircled with walls and had a circuit that still now remains undefined. Within these walls the Basilica Petriana was built, the largest Christian edifice of the whole settlement.²⁴ A paved road connected Classe to Ravenna, passing through the suburb of Caesarea, whose functional vocation and residential area are still little known.

While some of the emperors between 450 and 476 were not even crowned in Ravenna (like Petronius Maximus, Anthemius, Olybrius, Julius Nepos and Avitus), there seems to be no doubt that most of the *scrinia* of the central bureaucracy were established in Ravenna.²⁵ The African Praetorian prefecture at the time of its reconstitution in 534 had a staff of 396 persons.²⁶ It is not imprudent to suppose that, at least from the late 5th to mid-6th century, the employees of the Ravennate administration, along with their families, totalled about 1,500 people. Throughout Late Antiquity we do not know how many soldiers formed the units *in praesenti*; probably not many, since from the late 6th to early 7th century – a phase of particularly harsh pressure by the Lombards against the Byzantine lands – the regiments quoted in Ravenna are not more than 3, for a total that may have ranged from 600 to 1,200 soldiers.²⁷ Both the civil officers and the military received (apart from rations in kind) remunerations in money, the former in the form of annual salaries, the latter in irregular donations.²⁸

The political rise of Ravenna to the rank of imperial residence had significant repercussions also upon its bishopric. Little is known about the Church of Ravenna before the 5th century, apart from some rare epigraphs and the testimony of Andreas Agnellus writing in the early 9th century.²⁹ Among the northern-Italian episcopates, the rank of Ravenna began to emerge in the second quarter of the 5th century when,

²¹ Overview in Mauskopf Deliyannis 2010, 60–105.

²² Maioli 1990, 377–383; Maioli 2018, 337–338; Augenti 2010, 44–45.

²³ Augenti 2011, 15–44: 26–28.

²⁴ Augenti 2010a, 44.

²⁵ Cosentino 2015b, 55.

²⁶ *CJ* I 27, 1–2.

²⁷ They are the *numerus Ravennatis* (quoted in 591); the *numerus felicium Theodosiacum* (quoted around 600), and the *numerus Armeniorum* (quoted in 639): see Brown 1984, 90.

²⁸ Brown 1984, 86.

²⁹ See Orselli 1991, 405–422; Zangara 2000, 265–304; Mauskopf Deliyannis 2010, 84–85; Deliyannis 2016, 41–42.

according to Agnellus, the Ravennate see received metropolitan jurisdiction over 14 bishops.³⁰ Since at least the pontificate of Exuperantius (ca. 473–477) the Ravennate church began to be endowed with estates in Sicily.³¹ At the time of Pope Felix (526–530) it can be estimated that its land patrimony yielded about 16,000 / 17,000 *solidi* yearly.³² This amount grew considerably by virtue of two donations made by Justinian to Bishops Victor (ca. 537–ca. 544) and Agnellus (557–570).³³ The increase had to be especially relevant thanks to the second grant, which seems to have concerned all the assets of the Arian church located within the Ravennate ecclesiastical province.

Between the mid-5th to the mid-7th century, the Church of Ravenna came to amass a land patrimony distributed across Istria, Veneto, Emilia, Romagna, Marche, Umbria, Calabria, Campania, and of course Sicily.³⁴ The documentary dossier concerning the Sicilian possessions has recently been enriched by the discovery of a lead seal in Catania pertaining to a *rector* who was formerly unknown. His *bull*a was found during excavations made in 2015 in the area of the so-called Rotunda, a large thermal Roman structure dating to sometime between the 1st and 2nd centuries AD which was later transformed into a church devoted to the Mother of God. The seal bears on the obverse the legenda [B]arbat*i* rect(or)*i*s s(an)c(t)ae ec(c)l(esiae) Ra(ven-natis), while on the reverse an eagle stands with a Greek cruciform monogramme reading Θεοτόκε βοήθει.³⁵ Under Bishop Maurus (ca 649–671) the see of St. Apollinaris had more than quintupled its income compared to the early 6th century, making it possible to estimate its yearly revenue to the order of 70,000 *solidi* – which is a conservative estimate.³⁶ Historians are used to giving great emphasis to the privilege of autocephaly granted by Constans II (641–668) to the same Bishop Maurus on a date before March 666.³⁷ Some passages of the privilege, which was handed down to us in a Latin transcription from the 14th century, seem to imply that it also contained economic clauses.³⁸ If they are the same as those mentioned in another privilege bestowed by Constantine IV (668–685) upon Bishop Reparatus (about 671–678), they were not at all unimportant. As a matter of fact, the latter exempted the Ravennate bishop and its clergy from declaring publicly their own possessions for

³⁰ *LPRa*, 40 (Deliyannis, 198). But on the disputed origins of the metropolitan status of Ravenna see: *ivi*, pp. 102–107.

³¹ *LPRa* 31, 8 (Deliyannis, 184).

³² Cosentino 2005, 427, fn. 86.

³³ Cosentino 2005, 427, fn. 84.

³⁴ On the patrimony and the economic aspects of its functioning see: Fasoli 1979b, 69–96, Fasoli 1979a, 87–140 Fasoli 1991, 389–400; Brown 1979, 1–28; Cosentino 2012b, 417–439.

³⁵ The seal has been published by Guzzetta 2015, 573–589: 577–578, fig. n. 114.

³⁶ Cosentino 2012, 419.

³⁷ Edition and translation by Cosentino 2014, 153–169 (text: edition: 167–168). At p. 168, line 33, the group of letters in legature has to be solved as “legi”, not as “fiat”, as I wrongly did in my article.

³⁸ Cosentino 2014, 158, 162.

taxation and freed them from a series of indirect taxes (the *ripaticum*, *portaticum*, *siliquaticum* and *teloneum*).³⁹ In the course of the 5th and 6th centuries the bishopric became one of the most important economic powers of the city by managing an organization that included merchant ships, granaries, storehouses, traders and probably artisanal workshops.

Important political power, low demography and a high level of monetization made Ravenna a very peculiar urban society. The senatorial aristocracy did not care to reside in Ravenna, nor did it move there.⁴⁰ Rather, the city hosted a ruling class of civil servants tied to court activities, whose upper echelons were represented by people like the *cubicularius* Lauricius, who served under Emperor Honorius and was the patron of the church of San Lorenzo in Caesarea.⁴¹ In the early 6th century the local curia was still active.⁴² At that time, the main functions of its members consisted of the registration in the municipal archives of all juridical acts accomplished in the *territorium civitatis*, as well as taking part in the tax collection procedures of their district.⁴³ Those belonging to such class normally bore the honorific appellation of *virī laudabiles*. In written evidence concerning them, it still used a technical vocabulary that expressed the hierarchical distinction within the decurionate, so that we hear about *magistratus*, *decemprimi* and *principales*. Even the characteristic onomastic system of this social class is marked by strong conservatism, making regular use of the practice of the *duo nomina*, the gentile (Aelius, Aurelius, Flavius, Firmilianus, Hernilius, Melminius, Pompilius, Tremodius) and the cognomen, as it happens in the municipal register of Timgad of 363.⁴⁴ With reference to Ravenna, our sources do not report huge phenomena of urban pauperism, nor did the local church seem to promote foundations for the support of the weak and needy, which instead characterized places such as Rome or Naples.

Another very well documented class in Ravenna is that of the *virī honesti*. The qualification of *honestus* in the social vocabulary of the Principate had designated a generic expression of respectability, but starting from the Constantinian age it began to characterize legally all those who were admitted to testify within the courts.⁴⁵ Socially, it connotes membership to the wealthiest stratum of craftsmen, traders and other individuals exercising 'specialized' professions, such as *tabelliones* (public writers),

³⁹ *LPRa* 115, 10–20 (Deliyannis, 286–287).

⁴⁰ See Pietri 1991.

⁴¹ On the Sicilian estates of Lauricius, three *massae* and several *fundi*, see Tjäder I, pap. 1 = *ChLA* XX, no. 705; about his career and activity see *PLRE* II, pp. 659–600; Pietri 1991, 288; Caliri 2003, 429–468. Another *grand commis* of the Ravennate court was the *vir inlustris* Pierius, *comes sacrarum largitionum* under Odovacar, on whom see Tjäder I, pap. 10–11 = *ChLA*, no. 703; *PLRE* II, p. 885.

⁴² Between 474 and 572, 48 decurions are quoted in Ravenna: see the list in Ausbüttel 1987, 207–214; 213–214.

⁴³ See Cosentino 2018.

⁴⁴ See Chastagnol 1978, 49.

⁴⁵ See Cosentino 1999, 13–50; 16–20.

jewellers or bankers. On the one hand, they generated profits from their professional activities, on the other, they invested their revenue in small lots of lands and were also small landowners.⁴⁶ Even if most of them were probably unable to patronise precious artifacts such as Maximianus's *cathedra*, they nevertheless played an important role in supporting economic demand and buying craft products or foodstuffs of a certain quality, such as expensive wines from the East. The group of the *argentarii* was especially important among them; they were private entrepreneurs who worked in the sphere of finance and were involved with all that concerned the management of metallic wealth.⁴⁷ Bankers are quoted in the Ravennate sources of the 6th century in a higher percentage in comparison with the attestations of Rome, although the latter had a population much larger than that of Ravenna.⁴⁸ The most famous among them, Julian, earned enough money to be able to finance the building of at least three important churches, including San Vitale, San Michele in Africisco and Sant' Apollinare in Classe.⁴⁹ It is not an exaggeration to claim that Ravenna, along with Constantinople and Alexandria, was one of the centres of Mediterranean financial capitalism in the Justinianic age. Ravennate bankers had the opportunity to exploit a social milieu in which several social groups (dignitaries, soldiers, merchants, artisans, priests) could easily dispose of cash due to the presence of a mint. The circulation of money was concretely stimulated thanks to the buying and selling of artifacts and merchandise, as well as by financial loans. In this process, forms of public and private wealth strictly interplayed. It is in this fertile ground that the banking community of Ravenna flourished, having the opportunity to operate in an economic context characterized on the one hand by a small population, and on the other by several social groups possessing cash and other economic resources. As a matter of fact, both written and archaeological sources testify to an articulated organization of the labour market in late antique Ravenna. Our evidence quotes *architecti* (engineers), *argentarii* (bankers), *bracarii* (producers of trousers), *ceraearii* (producers of wax), *chrysokatallaktai* (moneychangers), *forenses* (public writers), *gunnarii* (producers of cloth), *(h)orrearii* (keepers of granaries), *libripendes* or *libripenses* (people responsible for weighing), *marmorarii* (marble merchants), *medici* (physicians), *monitarii* (money engravers), *navicularii* (shipowners), *negotiatores* (tradesmen), *olosiricopratae* (silk merchants), *pistores* (bakers) and *sapunarii* (soapmakers).⁵⁰ Workshops existed in

⁴⁶ Ibid., 32–35.

⁴⁷ Cosentino 2015, 243–254; on banking activity in Late Antiquity, ibid. 245, fn. 1 (with bibliography).

⁴⁸ Ibid., 247–248.

⁴⁹ On Julianus see Deichmann 1951, 5–26; Deichmann 1976, 21–27; Susini 1959–1960, 153–158; Bovini 1970, 125–150; Brown 1983, 39–46; Barnish 1985, 3–38; Cosentino 2006, 43–48.

⁵⁰ *Argentarii*: *PIB* II, 223 (Iulianus), III, (s. v. Vitalis); *architecti*: *PIB* I, 126 (Aloisus); *bracarii*: *PIB* I, 254 (Bonus); *ceraearii*: *PIB* III (s. v. Vitalis); *chrysokatallaktai*: *PIB* I, 334 (Marinus); *forenses*: *PIB* III (s. v. Fl. Vitalis); *gunnarii*: *PIB* II, 262 (Laurentius); *(h)orrearii*: *PIB* II, 250 (Iovinus), 260 (Laurentius), III (s. v. Quiriacus); *libripendes*: *PIB* III (s. v. Serapio); *medici*: *PIB* II, 284 (Leontius); *monitarii*: *PIB* II, 263 (Laurentius), *PIB* III (s. v. Paschalis, Vitalis); *navicularii*: *PIB* II, 269 (Leo); *negotiatores*: *PIB* II, 346

which manuscripts were copied in Latin, Greek and Gothic languages; there were lapidaries able to cut and engrave metal, marble and stone using Latin and Greek alphabets. The structures of the harbour of Classe brought to light by archaeologists (warehouses, docks, kilns, glassmakers, taverns)⁵¹ implied the existence of porters, boatmen, ceramicists, glazers and publicans at the least.

The great season of urban ecclesiastic building occurred from the mid-5th to mid-6th century and was the making of Ravenna as a court centre. Such an important construction activity was economically supported by financiers who, to a large extent, came from all the economic groups active in the city during this period: the imperial court (San Giovanni Evangelista and Santa Croce)⁵²; the Orthodox episcopate (Basilica Ursiana, Basilica Apostolorum, Sant'Agata, Santa Maria Maggiore, Santo Stefano Maggiore, Santissimi Giovanni e Paolo built at the end of the 6th century)⁵³; the royal Ostrogoth power and the Arian episcopate (modern Sant'Apollinare Nuovo, originally the palatine church serving Theoderic's palace intitled to the Saviour; the Arian cathedral Santo Spirito, the Arian baptistery, the *ecclesia Gothorum* as well as Sant'Eusebio)⁵⁴; the imperial bureaucracy (San Lorenzo in Caesarea and Santissimi Giovanni e Paolo, in which an ambo was donated by Adeodatus *primicerius stratorum*)⁵⁵; and bankers (San Vitale, San Michele in Africisco, Sant'Apollinare in Classe).⁵⁶ On the whole, it can be suggested that the character of Christian evergetism in the city was marked by the action of influential and socially structured groups. It was less dependent upon modest offerings from the middle class to support the erection of churches than was seen in several other places along the northern Adriatic rim (Aquileia, Grado, Trieste, Pula, Poreč).⁵⁷ It is true that the more ancient monumental legacy of Ravenna has been subjected to restructuration, reuse, spoliation and destruction, to the extent that it might show a distorted image of the economic forces that made its edification possible. However, one also has to consider that the pavements of churches like San Vitale or Sant'Apollinare in Classe come to us with no excessive

(Martinus); *olorisicopratai*: PIB II, 37 (Georgius), III (s. v. Theodolus); *pistores*: PIB I, 465 (Florentinus); *sapunarii*: PIB II, 224 (Isacius).

51 See above, fn. 23.

52 Mauskopf Deliyannis 2010, 61–83 with former bibliography.

53 Mauskopf Deliyannis 2010, 84–105, 220 (Sts John and Paul).

54 Mauskopf Deliyannis 2010, 139–187, with former bibliography.

55 S. Lorenzo in Caesarea was built by the *cubicularius* Laurentius: see above, fn. 41; the donation by the *primicerius* Adeodatus is remembered in an epigraph, that I would read as follows: *De donis D(ei) et s(an)c(t)orum Iohannis et Pauli Adeodatus prim(icerius) strator(um) in(l)ustris p(raefecturae) temp(ori)b(us) d(o)m(in)i v(ene)r(a)b(lis) Marinian(i) arc(hi)ep(iscopi) fec(it) ind(ictione) XV: PIB I, 97*. The correct technical qualification of Adeodatus was not, as often affirmed in scholarship, *primus strator*, but *primicerius stratorum* of the Praetorian Praefecture.

56 See above, fn. 47.

57 See some examples in Caillet 1993, 142–346.

alterations, nor do they convey a strongly communitarian image as characterized by the donors of mosaic pavements at Santa Maria delle Grazie or Sant'Eufemia in Grado.

In 540 Ravenna was occupied by the troops of Belisarius after almost fifty years of Gothic regime. Did this change entail transformations under the social and economic standpoint? I think it is possible to answer positively to this question by pointing out at least three fields in which the passage from one regime to another implied some evident changes. The first is the fate of the Gothic community after the conquest of Ravenna, and even more after the end of the Graeco-Gothic war. Historiography did not reach a clear consensus about the identity of the barbaric peoples and their degree of integration within the Roman world.⁵⁸ The Ravennate situation does not seem to leave room for doubts about the fact that the Gothic community interacted with the socioeconomic fabric of the city, but at the same time it always preserved its own identity and limited its integration with local groups. During the Ostrogothic period, the northeastern sector of Ravenna became a culturally Arian area by hosting the Arian cathedral with the episcopal palace and baptistery, as well as the churches of Sant'Anastasia, and that of the Theoderician palace (San Salvatore, then S. Martino in Ciel d'Oro and finally Sant'Apollinare Nuovo).⁵⁹ Sant'Eusebio and San Giorgio (later Catholic dedications) were always situated in this neighbourhood, but outside of the walls. In Classe there existed the church of San Sergio (later Catholic dedication), which perhaps was built under the Odovacar's regime; in Caesarea, that of San Zenone (also with a later Catholic dedication). I do not see evident reasons for not concluding that the northeastern sector of the city was characterized by a strong presence of the Gothic settlement, despite some scholars denying this.⁶⁰ Actually, it appears quite natural that the Gothic component, being Arian for the most part, wanted to settle near its own places of worship. Some might argue that until the age of Theodosius I, and perhaps still little beyond, Arianism was a religious profession spread throughout the whole Roman *oikoumene* and that not all the Goths were Arians.⁶¹ Nevertheless, at the beginning of the 6th century several sources bore testimony to a new wave of intolerance against Arianism which arose in

58 On this topic much has been written. Historiography knows sharp differences of opinion about barbarian identity; see, with regards to this, the essays collected by Gillett 2002; Goffart 2006; Halsall 2007, esp. 37–62; Heather 2010, 1–35 (an approach that I share). A balanced overview of historiographical trends is proposed by Pohl 2008, 93–101.

59 About the location of the mentioned churches and on their rite: Cirelli 2008, 98–100; Mauskopf Deliyannis 2010, 143–187.

60 Cfr. Sotinel 2008, 383–384 (with some minor inconsistencies as the affirmation according to which the Byzantine conquest of Ravenna would have occurred in 536 or about dating to 553 the donation with which Justinian granted to the Catholic church all the properties of the Arian church; optimistically, for the author, the wall mosaics of Sant'Apollinare Nuovo were substituted by the Catholics “con facilità”); Augenti 2010a, 357–358.

61 The same mother of Theoderic, ‘Erelieva (or Ereriliva) qui et Eusebia’, was Catholic: *PLRE* II, p. 400. The exact spelling of her name should be ‘Ereleuva’: see Francovich/Onesti 2007, no. 90,

Constantinople, a wave that had repercussions upon the Gothic community across the entire Mediterranean world.⁶² The comparison between the figurative cycles of the Orthodox and Arian baptistery, as well as some images adorning the most important Ravennate churches, such as San Vitale or Sant'Apollinare Nuovo, do not seem to show a marked difference in the representation of the Divine between the two religious professions, Arianism (which for the most part coincided with 'Omeian' Christianity) and Catholicism (namely Nicene and Chalcedonian Christianity).⁶³ Perhaps these differences were more evident in the cult of saints. On the other hand, it has been noted that the Byzantine reconquest of Ravenna left clear traces of a Catholic intervention in some of the ecclesiastic edifices of the city. The precision by which, in the first half of the 9th century, Agnellus hands down the ceremonies of the *reconciliatio* – namely the reconsecration to Catholicism of formerly Arian churches – occurred in 550s and 560s seems to support this idea.⁶⁴ The Theoderician palatine church devoted to the Saviour was re-intitulated to St. Martin, a saint who was thought to be a fierce persecutor of the Arians.⁶⁵ The substitution of long bands of mosaics along the northern and southern walls of the central nave testifies to the obstinacy with which, during the Justinianic age, the new regime cancelled the religious and political memory of the Gothic presence.⁶⁶ San Michele in Africisco was consecrated in 554 under Bishop Maximianus; the decoration of its apse – no longer extant today, but known to us from reproductions drawn before the mosaics were detached from the wall and sent to King Friderich Wilhelm IV of Prussia in 1842⁶⁷ – depicted a young Christ standing between the archangels Michael and Gabriel, while holding a crown in his right hand and an open Gospel in his left. The faithful could clearly read in the open pages of the Book the two following sentences: *qui vidit me vidit et Patrem* (Io. 14, 9); *ego et Pater unum*

no. 45, fn. 90. This situation changed beginning with the 5th century: Gwynn 2010, 229–263, especially 257–260; Petrini 2011, 339–357.

⁶² Cosentino 2016, 133–149: 137.

⁶³ See Ward-Perkins 2010, 265–281. See also the prudent considerations by Brown 2007, 417–426 and discussion 427–441. The approach by Amory 1997, 236–276 to the relationship between Arianism and Gothic community tries to demonstrate that there was no relation between religious profession and ethnic-cultural identity.

⁶⁴ See Urbano 2005, 71–110

⁶⁵ See Van Dam 1993, 17–18; Baldini 2012, 383–397, esp. 387, argued convincingly, on the base of the witness provided in 1586 by the Franciscan father Gianfrancesco Malezzappi, that the male procession was led not by St. Martin, but by St. Stephen the Protomartyr.

⁶⁶ Urbano 2005, 71–110; Mauskopf Deliyannis 2010, 164–174; Baldini 2012, pp. 383–397; Carile 2012, 127–132; Jäggi, 2013, 180–182 and 184–185, publishes a useful synoptic scheme where it is possible to visualize the mosaic cycles of the Theoderician phase in comparison with those dated after 561.

⁶⁷ Jäggi 2013, 284.

sumus (Io. 10, 30). As has been noted by B. Ward-Perkins, they conveyed a message that unambiguously had an evident Catholic and anti-Arian content.⁶⁸

Moreover, one has to consider that the Gothic population was decimated by the change of regime and became socially insignificant. Throughout northern and central Italy, but in Ravenna in particular, we have examples of men and women of the Gothic community who, in the second half of the 6th century, converted themselves to Catholicism and donated all, or portions, of their patrimonies to ecclesiastic institutions in exchange for protection. Such is the case, for instance, of Ranilo *sublimis femina* who, in 557, along with her husband, donated both movable and immovable goods to the Church of Ravenna.⁶⁹ In Rieti, also in this same year, Gundihild, widow of the *vir inlustris* Gudahals, appointed legal tutors for her sons, Lendarit and Landarit.⁷⁰ In the late 6th century, Wililiwa, who styled herself as *donatrix guta*, bequeathed her entire patrimony to the Church of Ravenna.⁷¹ Beginning with this period, names with Gothic origins tend to disappear from the onomastic record of Ravennate documents. The members of the Gothic community who survived the war were obliged to convert to Catholicism if they wanted to keep their goods. The dedication of Arian churches underwent a radical process of new intitutionation at every shrine. In short, the eastern Romans systematically dismantled the social organisation of the defeated, deprived them of their goods and obliterated their religious memory.

The long-lasting consequences of the collapse of the Ostrogothic rule also affected the rural landscape. Since the end of the 6th century, in a revival of conflicts in the Italian scenario due to the Lombard invasion, the military began to increase their role as landowners. Based upon a few extant documents of sale from the 7th century – 28 pieces of evidence – the percentage of land held by them in this period can be estimated at 25%.⁷² In the 8th century, when our sample of documentation is much more abundant, reaching up to about 78 documents, this percentage increases considerably. By combining senior officers of the army with simple soldiers, it can be inferred that about 64% of the land of the Exarchate and Pentapolis was exploited by possessors of military condition.⁷³ I spoke of possessors and not owners,

⁶⁸ Ward-Perkins 2010, 285–286. Contrary to Ward-Perkins, *ibid.*, p. 279, it seems to me difficult not to consider as explicitly anti-Arian the sentence written in the Gospel held by the Christ who is depicted in the Cappella Arcivescovile: *Ego sum via, veritas et vita* (Io 14, 6–9). As the same Ward-Perkins clarifies, the sentence is quoted from a passage whose sense was that of explaining that who knows the Son knows also the Father; on the other hand, it is always from this passage that it was selected the quotation ‘qui vidit me vidit et Patrem’ depicted in the apse of S. Michele in Africisco. The Cappella Arcivescovile, as is well-known, was built by Bishop Peter II (494–519).

⁶⁹ Tjäder I, pap. 13 = *ChLA* XXIX, n. 880. *PLRE* III, 1077–1078.

⁷⁰ Tjäder I, pap. 7 = *ChLA* XX, n. 712. *PLRE* III, 364.

⁷¹ Tjäder II, pap. 28, 56 = *ChLA* IV, no. 232; *ChLA* IX, no. 400.

⁷² Cosentino 1999, 36–37.

⁷³ Cosentino 1999, 38–41.

because the amount of land belonging to the Ravenna church allocated in emphyteusis to the military is remarkable. As far as rural landscape is concerned, the transition from Late Antiquity to the early Middle Ages thus marks a noteworthy strengthening of groups belonging to the military tradition. The latter increased their land patrimony by managing assets belonging to the Church of Ravenna, becoming in the 8th and 9th century a true armed *clientela* of the archbishops.⁷⁴

Did the Byzantine conquest entail a major presence of people and traditions coming from the East in the social and economic life of the city? With regards to this, scholarly debate has mainly focused on demography and the Greek language as mirrored in the onomastic patrimony of the Ravennate region.⁷⁵ Such a debate did not achieve unambiguous results, however, since very ordinary names as 'Iohannes', 'Stephanus' or 'Georgius' were spread both in the Greek and Latin cultural milieu, making it difficult to reach persuasive conclusions according to this perspective.⁷⁶ Our increase of data concerning the port of Classe, which is today more numerous than in the 1980s, allows us to approach this topic under the viewpoint of material culture. There seems to be no doubt, according to the analysis proposed by archaeologists, that until the first half of the 6th century the majority of transport containers and tableware came from Africa. However, beginning with the second half of the same century there was a strong diversification of the areas of import of the amphorae, with an increase of those coming from Syria, Palestine, Egypt, Greece (Samos and Chios) and Anatolia (Sardis).⁷⁷ The centre of gravity of imports of certain staple items, such as olive oil and wine, moves decisively eastwards and will continue to remain as such until the end of the 7th century, when Classe ceased to be a major international hub. Of course, there is no mechanical correlation between goods and human groups, since the eastern products could have been very well distributed to Ravenna by local operators. Nevertheless, it is hard to think that the entire process of acquisition and distribution of foodstuffs, spices, textiles and pottery did not have repercussions on the Greek or Syriac speaking communities of Ravenna in a period when the axis of imports was decidedly unbalanced towards the eastern Mediterranean. In the second half of the 6th century, the papyri of Ravenna

⁷⁴ On this aspect: Carile 1985, 81–94; Vespignani 2001; Schoolman 2016, 211–238, esp. 224–238.

⁷⁵ Before the Byzantine conquest of Ravenna, according to Ruggini 1959, 186–308 (esp. 267–269) the demographic composition of the northern Italian cities was as follows: 70% of Latins, 16% of Easterners and 14% of Goths. Guillou 1969, 78–80 argued that between 584 and the early 8th century the Greek speaking element in the Exarchate would have increased from 16% to 43% (see also Guillou 1991, 101–108). The figures of Guillou, however, have been criticized by Brown 1984, 67–69; Brown 1988, 27–160 (especially 134); Id., 1991, 135–149. Important studies on the onomastics of the Exarchate and Pentapolis are also those by Lazard 1973, 7–38; Lazard 1978, 1–15; Lazard 1985, 33–61; see also Haubrichs 2016, 253–295.

⁷⁶ See the observations made in Cosentino 2012a, 173–185: 174–177.

⁷⁷ Augenti 2005, 238–240; Cirelli 2007, 45–50; Cirelli, 2008, 131–137; Augenti/Cirelli 2010, 605–615. See also the contribution by C. Guarnieri in this volume.

describe silk merchants of probable Antiochene origin; perhaps the same family that Julian came from in Syria.⁷⁸ We can reasonably conclude, therefore, that if on the one hand the inclusion of Ravenna in the Eastern Roman Empire did not involve a massive phenomenon of ‘Hellenization’ of the city, on the other, the functioning mechanisms of its economic life were deeply influenced by this event. The new political condition probably also implied an increase of the Greek-speaking component that resided in it.

What economic model does Ravenna offer for Late Antiquity? A key role in supporting production, distribution and demand is provided by the public apparatus. However, this stimulus is not put into action through the centrality that assumes the cycle of taxation in spreading money throughout the economic circuit. The ‘circular’ model of late antique economy proposed in the 1980s by a brilliant numismatist and economic historian like Michael Hendy – according to which, in essence, the main channel of monetization of society would have been the coinage of money for the needs of the *publicum* (army and bureaucracy), its reacquisition by the state thanks to its fiscal organization, and the new introduction of money in the productive system by means of payments destined to bureaucracy and army – displays in Ravenna evident limits of functionality.⁷⁹ Within the Adriatic city it is actually very doubtful that, for instance, one of the most important actors of economic performance, the episcopate, was able to give a return to the state in the form of taxation the same quantity of money that it was able to acquire on the productive circuit. Likewise, it is very doubtful that the commercial demand was largely generated by the movements of the *annona* promoted by state administration. The estimates elaborated by Enrico Cirelli for the volumetric capacity of building 17 of the port of Classe, namely 9,360 kg of grain, were sufficient to potentially feed around 6,000 people in one day. Taking this datum as a starting point, Cirelli comes to hypothesize that the late antique harbour area had a storage capacity that could potentially feed 300,000 inhabitants in one month.⁸⁰ If compared to the reconstructive hypotheses of the demography of 5th-6th century Ravenna, these figures raise doubts as to whether the granary supply was destined entirely to the public apparatus or even to the city itself. It is not clear at the current state of research what could have been its destination, probably it was meant for a much larger area than Ravenna. Although we do not yet have clear archaeological evidence, we can assume that a portion of the staples arriving in the port of Classe were distributed in the Po Valley through the Po river. If so, since Classe remained a large emporium in which products from the East arrived until the late 7th century, trade networks were probably not restricted solely to the Byzantine Italian regions, but they also involved Lombard territories.

⁷⁸ Cosentino 2015, 250–251.

⁷⁹ Hendy 1985, 395–404, 619–626, 662–667; Hendy 1989; Hendy 2002, 1307–370.

⁸⁰ Augenti/Cirelli 2010, 609–610.

More than through the exercise of taxation, the role of the state appears fundamental in the economy of Ravenna for its own institutional presence, which guaranteed the functioning of the mint, involved the presence of officials, attracted investments, and promoted policies of spending within the territory. These characteristics in Ravenna are enhanced by the modest size of its population and by the environmental landscape in which the city rose up. The need that it had to make recourse to external sources for its own supply activated connections between itself and regions far from the city, given the limited agricultural productivity in the area surrounding the urban centre. Wheat came from Istria, Sicily and Tunisia; olive oil from Istria, Syria and Tunisia; wine from Romagna, Calabria, Chios, Palestine, Samos, and Alexandria.⁸¹ As far as fabrics are concerned, it can be assumed that they came from the Po Valley, the Balkans (raw wool), and Apulia (finest wool and purple),⁸² while certainly some silk qualities arrived from Syria. The port of Classe, which was maintained in efficiency by the Byzantine government until the end of the 7th century, was the focal point that connected Ravenna with a productive hinterland much larger than the area around the city. The vicissitudes of this great emporium parallel the history of the late antique Mediterranean. As Andrea Augenti has pointed out, it declined at the end of the 7th century in coincidence with the transformation of the long-distance system of exchanges inherited from Antiquity.⁸³

This chronology is also significant in relation to the capacity that the Byzantine government had to keep the port of Classe efficient. In Late Antiquity, the management of ports as a whole seems to have been a task assigned to city authorities, with the exception of those cities that were seats of imperial residences, such as Constantinople, Antioch and Ravenna, where imperial authority took direct control over this.⁸⁴ The maintenance of harbour infrastructures involved a high economic investment, and it is not by chance that our sources provide general information almost exclusively for the interventions financed by the emperors, such as Constantius II in Antioch, or Justinian in Constantinople.⁸⁵ Towards the end of the 7th century the exarchal office, to which presumably the maintenance of the port basin of Classe was entrusted, seems to experience a crisis of its political authority over the whole peninsula. The crisis of authority by the exarch probably also coincided with a diminution of his financial resources for supporting large-scale military policies, which may have affected his ability to provide for dredging the seabed, maintenance of the docks and repaving of the roads in the area of Classe.

The decline of the harbour leads us to wonder to what extent this event corresponded with an economic crisis in Ravenna. At the current state of research, it

⁸¹ Cosentino 2005, 427–428; Cosentino 2017, 345.

⁸² Cosentino 2017, 345.

⁸³ Augenti 2010b, 49–50.

⁸⁴ See Cosentino 2019, forthcoming.

⁸⁵ Cosentino 2019, forthcoming

seems possible to argue that the progressive abandonment of Classe did not impede merchandise from reaching Ravenna via transmarine trade. Since the 8th century the importance of smaller emporia, such as those of Comacchio, Venice, and Rimini increased throughout the whole northern Adriatic basin.⁸⁶ In Ravenna, a minor port located not far from the Mausoleum of Theoderic continued to be in function, probably the *portus Lachernus* mentioned by Agnellus.⁸⁷ Even in a reduced scale, goods coming from Apulia, the Aegean and the Black Sea continued to be imported. Written evidence documents the presence of traders in Ravenna throughout the 8th and 9th century.⁸⁸ Taken as a whole, the economic picture of Ravenna in this period does not seem to be that of a city adrift. In essence, it remained a prosperous centre, albeit in a Mediterranean context that was consistently changed in comparison to its situation during Late Antiquity. Ravenna remained integrated to an area, the northern Adriatic, where regional, interregional and, to a certain extent, international maritime exchanges continued to be practiced during the transition between Byzantine, Lombard and Carolingian rule.⁸⁹

In a well-known passage by Andreas Agnellus concerning Sergius, bishop of Ravenna (ca. 748–ca. 769), the latter is depicted as follows: «he from the borders of Persicetus and all across the Pentapolis until Tuscia and the *Po di Volano*, like an exarch, governed everything as the Romans were used to do».⁹⁰ It is exemplary that, in the early Middle Ages, the bishop of Ravenna assumes the role as heir of the state in conditioning socioeconomic process. Since the second half of the 6th century, had become the second-largest owner of the entire peninsula (after the titular of the Church of Rome) and he administered a vast land domain that extended across several regions. It is no coincidence that the Ravennate bishopric had resources to continue to support the ecclesiastic building activity in the 7th and even in the 8th century, when the curve of investments in the city reached its lowest level.⁹¹ Particularly important for the economy of Ravenna was the relationship with Sicily, certainly one of the most prosperous regions of the Mediterranean in the 7th and 8th century. This was especially true if, as it has been suggested, the Sicilian land patrimony of the Church of Ravenna was not seized by the iconoclast emperors and continued to operate until the Muslim invasion.⁹² There is no positive evidence about it and the question, as it has been noted, is destined to remain open until the

⁸⁶ Comacchio: see Gelichi 2012, 219–233 (with former bibliography); Comacchio and Venice: Gelichi 2012, 31–38; Venice: Gelichi/Negrelli/Ferri/Cadamuro/Cianciosi/Grandi 2017, 23–113; Rimini: Negrelli 2008, 10–29.

⁸⁷ *LPRa*, 140 Deliyannis (318).

⁸⁸ Cosentino 2012b, 431, fn. 52, 53.

⁸⁹ Cirelli 2015, 101–132.

⁹⁰ *LPRa*, 159, 180–183 (Deliyannis, 337). Interesting considerations on the role played by the Ravennate episcopate in the 9th and 10th century are in Ortenberg West-Harling 2015.

⁹¹ Cirelli 2008, 146–147.

⁹² Cosentino 2012b, 424, fn. 27.

discovery of new archaeological evidence.⁹³ However, I would like to point out that, if there is no indisputable evidence supporting this view, we have a number of hints that make it probable. First, one would not understand why the iconoclast emperors should have punished the Church of Ravenna by seizing its Sicilian estates, when during the diplomatic crisis that broke out between Rome and Constantinople regarding the cult of images, the Church of Ravenna kept a very low profile and was not openly hostile towards the Byzantine emperors. Second, after the conquest of Ravenna by the Lombards, the attitude of the *basileis* towards the see of St. Apollinaris remained extremely prudent until at least the first half of the 9th century, as a reconquest of the city by the Byzantine forces was among the political options. Third, if the *mancus* was really the Sicilian light *solidus* (as has been argued in recent scholarship),⁹⁴ its initial diffusion in the Venetic and Exarchal region would be justified, in part at least, by the arrival in Ravenna of the revenues of the Sicilian estates. Fourth, on the site of the Basilica Petriana (Classe), globular amphorae have been found with Arabic graffiti, which might indicate their original marketing in a Muslim milieu.⁹⁵ Lastly, the excavations of the monastery of St. Severus (Classe) have brought to light fragments of glazed pottery from Islamic importation (even an enamelled plate of Iraqi production) dating back to the 9th–10th centuries.⁹⁶ These findings seem compatible with the idea that the possessions of the Ravennate church in Sicily may have been the places where this material passed before reaching Classe.⁹⁷ In any case, written evidence confirms that in the second half of the 8th and in the 9th century the area of Ravenna and Pentapolis experienced a use of gold coins in transactions that finds no comparison in other northern Italian regions falling under Carolingian rule.⁹⁸

During the post-exarchal period the land patrimony of the Church of Ravenna became the main economic lung of the city. In the early Middle Ages, it was an economic space that ceased to use a large transmarine emporium, like Classe, choosing instead to enhance rather small river ports, inland waterways and terrestrial itineraries. Even the network of exchanges had a narrower geographical horizon compared to Late Antiquity. An aristocratic class of military tradition, originating from the high ranks of the Byzantine army, cemented its loyalty around the archbishop. Such a class increased its own allodial patrimony by acquiring estates in emphyteusis from

⁹³ See Delogu 2010, 140, n. 125. Vivien Prigent is skeptical about the possibility that the Church of Ravenna kept its estates in Sicily after the middle of the 8th century (personal communication of the Author).

⁹⁴ Cosentino 2012b, 431–439; Prigent 2014, 701–728.

⁹⁵ Cirelli 2015, 112. These graffiti have been already reported by Fiacadori in 1983

⁹⁶ Augenti/Cirelli 2016, 297–321: 315–316.

⁹⁷ Last contribution about the relationship between Ravenna and Sicily: Bondi/Cavalazzi 2015, 465–470.

⁹⁸ Cosentino 2012b, 423–424; Brown 2016, 335–344: 340–341.

the Church of Ravenna. This bond created a strong solidarity between the episcopate and the Ravenna aristocracy, forming a closed social bloc that governed the city and the area of the Exarchate and Pentapolis until the second half of the 9th century.⁹⁹ Only in this period did the wedding between Martinus *dux* and the *comitissa* Ingelrada or Angelrada (celebrated between 870 and 899) mark the presence of components of Carolingian origin in the ruling class of our region. The former was the son of the Ravennate *dux* Gregorius and nephew of Archbishop John VII, while the latter was the daughter of Hucpaldus *comes palatii* and *signifer*, possibly a descendant of Hucpaldus, count of Verona between 809 and 820.¹⁰⁰ Such a union brought forward the formation of a large seigneurial dominion, which included estates spread across the territories of Ferrara, Comacchio, Ravenna, Rimini, Faenza and Forlì. It sanctioned a social interplay between major families of Byzantine and Carolingian traditions. On the other hand, the documents of Ravenna dating to the 9th and 10th century testify to a considerable number of *negotiatores*.¹⁰¹ However, unlike those of Comacchio or Venice, they are not engaged in an intermediary trade across the Po Valley, northern Adriatic and Eastern Mediterranean, but in small segments of exchanges in Emilia, Romagna, and Marche, namely the regions that in the 10th century constituted the core of the land patrimony of the Church of Ravenna.

Bibliography

Primary Sources

- Procopius, *Bellum Vandalicum*, in Procopii Caesariensis *Opera omnia*, recognovit J. Haury, addenda et corrigenda adiecit G. Wirth, I, 307–552. Lipsiae 1962.
- Sidonius Apollinaris. *Epistulae*, edidit A. Loyen, 3 vols. Paris 1960–1970.
- Tjäder Jan-Olof. 1982. *Die nichtliterarischen lateinischen Papyri Italiens aus der Zeit 445–700. II. Papyri 29–59*. Skrifter utgivna av Svenska Institutet i Rom, 4°, XIX: 2. Rome.

Secondary Sources

- Amory, Patrick. 1997. *People and Identity in Ostrogothic Italy, 489–554*. Cambridge.
- Arslan, Ermanno. 2005. “La zecca e la circolazione monetale.” In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull’Alto Medioevo), 191–229. Spoleto.

⁹⁹ See above, fn. 74.

¹⁰⁰ See Rinaldi 1996, 211–240; Schoolman 2016, 224–225.

¹⁰¹ Cosentino 2017, 354–356 for the quotation of the relevant sources.

- Augenti, Andrea. 2005. "Nuove indagini archeologiche a Classe." In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo), 238–240. Spoleto.
- Augenti, Andrea. 2010a. "Nascita e sviluppo di una capitale: Ravenna nel V secolo." In *Le trasformazioni del V secolo. L'Italia, i barbari e l'Occidente romano* (Seminari SAAME, 2), edited by Paolo Delogu and Stefano Gasparri, 343–369. Turnhout.
- Augenti, Andrea. 2010b. *Città e porti dall'antichità al medioevo*. Roma.
- Augenti, Andrea. 2011. "Classe: archeologia di una città scomparsa." In *Classe. Indagini sul potenziale archeologico di una città scomparsa*, edited by Andrea Augenti, 15–44. Bologna.
- Augenti, Andrea and Cirelli, Enrico. 2010. "Classe: un osservatorio privilegiato per il commercio della Tarda Antichità." In *LRCW3. 3rd International Conference on Late Roman Coarse Wares, Cooking Amphorae in the Mediterranean: Archaeology and Archaeometry, Comparison between Western and Eastern Mediterranean*, edited by Gabriella Guiducci, Simonetta Menchelli, Marinella Pasquinucci and Sara Santoro, 605–615. Oxford.
- Augenti, Andrea and Cirelli, Enrico. 2016. "San Severo and religious life in Ravenna during the ninth and tenth century." In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 397–321. London.
- Ausbüttel, Frank. 1987. "Die Curialen und Stadtmagistrate Ravennas im späten 5. und 6. Jh." *Zeitschrift für Papyrologie und Epigraphik* 67: 207–214.
- Baldini, Isabella. 2012. "La processione dei martiri in S. Apollinare Nuovo a Ravenna." In *Martiri, santi, patroni: per una archeologia della devozione*, edited by Adele Coscarella and Paola De Santis, 383–397. Cosenza.
- Barnish, Sam J. B. 1985. "The Wealth of Julian argentarius: Late Antique Banking and the Mediterranean Economy." *Byzantion* 55: 3–38.
- Bolognesi, Dante. 1994. "Le vicende demografiche." In *Storia di Ravenna*, IV, *Dalla dominazione veneziana alla conquista francese*, edited by Lucio Gambi, 639–640. Venezia.
- Bondi, Mila and Cavalazzi, Marco. 2015. "Rapporti economici tra la chiesa di Ravenna e la Sicilia nell'altomedioevo: storia e archeologia." In *Isole e terraferma nel primo cristianesimo: identità locale ed interscambi culturali, religiosi e produttivi*, I, edited by Rossana Martorelli, Antonio Piras and Pier Giorgio Spanu, 465–470. Cagliari.
- Bovini, Giuseppe. 1970. "Giuliano l'argentario il magnifico fondatore di chiese ravennati." *Felix Ravenna*, 10: 125–150.
- Brown, Thomas S. 1979. "The church of Ravenna and the imperial administration in the seventh century." *The English Historical Review* 370: 1–28.
- Brown, Thomas S. 1983. "La chiesa di Ravenna durante il regno di Giustiniano." In *XXX Corso di Cultura e Arte Ravennate e Bizantina*. Ravenna: 39–46.
- Brown, Thomas S. 1984. *Gentlemen and Officers. Imperial Administration and Aristocratic Power in Byzantine Italy A. D. 554–800*. Hertford.
- Brown, Thomas S. 1988. "The Interplay between Roman and Byzantine Traditions and Local Sentiment in the Exarchate of Ravenna" in *Bisanzio, Roma e l'Italia nell'alto medioevo*, I, 127–160. Spoleto.
- Brown, Thomas S. 1991. "Ebrei ed Orientali a Ravenna." In *Storia di Ravenna*, II.2, *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 135–149. Venezia.
- Brown, Thomas S. 1993. "La chiesa di Ravenna durante il regno di Giustiniano." *CARB* 30: 39–46.
- Brown, Thomas S. 2007. "The role of Arianism in Ostrogothic Italy: the evidence from Ravenna." In *The Ostrogoths from the Migration Period to the Sixth Century: An Ethnographic Perspective*, edited by Sam Barnish and Federico Marazzi, 417–426. Woodbridge.

- Brown, Thomas S. 2016. "Culture and society in Ottonian Ravenna: imperial renewal or new beginning?" In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 335–344. London.
- Cailliet, Jean-Pierre. 1993. *L'évergétisme monumental chrétien en Italie et à ses marges*. Collection de l'École Française de Rome, 175. Roma.
- Caliri, Elena. 2003. "Il cubiculario Lauricius. Squarci di storia agraria siciliana del V secolo d. C." *Mediterraneo Antico* 6/1: 429–468.
- Campanella, Tommaso. 1944. *La Città del Sole* [1602], edited by Alberto Savinio. Roma.
- Carile, Antonio. 1983. "Continuità e mutamento nei ceti dirigenti dell'Esarcato fra VII e IX secolo." In *Istituzioni e società nell'alto medioevo marchigiano*, 115–145. Ancona.
- Carile, Antonio. 1985. "Terre militari, funzioni e titoli bizantini nel «Breviarium»." In *Ricerche e studi sul «Breviarium Ecclesiae Ravennatis» (Codice Bavaro)*, 148–149. Roma.
- Carile, Maria Cristina. 2012. *The Vision of the Palace of the Byzantine Emperors as a Heavenly Jerusalem*. Spoleto.
- Chastagnol, André. 1978. *L'album municipal de Timgad* (Antiquitas, Reihe 3, 22). Bonn.
- Christie, Neil and Gibson, Sheila. 1988. "The City Walls of Ravenna." *Papers of the British School at Rome* 56: 57–196.
- Cirelli, Enrico. 2007. "Ravenna e il commercio nell'Adriatico in età tardoantica". In *Felix Ravenna. La croce, la spada, la vela: l'alto adriatico fra V e VI secolo*, edited by Andrea Augenti and Carlo Bertelli, 45–50. Milano.
- Cirelli, Enrico. 2008. *Ravenna: archeologia di una città*. Borgo San Lorenzo.
- Cirelli, Enrico. 2015. "Material culture in Ravenna and its hinterland between the 8th and 10th century." In *Three Empires, Three Cities: Identity, Material Culture and Legitimacy in Venice, Ravenna and Rome, 750–1000*, edited by Veronica West-Harling, 101–132. Turnhout.
- Cosentino, Salvatore. 1999. "Il ceto dei *virī honesti* (οἱ αἰδέσιμοι ἄνδρες) nell'Italia tardoantica e bizantina." *Bizantinistica. Rivista di Studi Bizantini e Slavi* 2a s., 1: 13–50.
- Cosentino, Salvatore. 2005. "L'approvvigionamento annonario di Ravenna dal V all'VIII secolo: l'organizzazione e i riflessi socio-economici." In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo), 405–435. Spoleto.
- Cosentino, Salvatore. 2006. "Le fortune di un banchiere tardoantico: Giuliano argentario e l'economia di Ravenna nel VI secolo." In *Santi banchieri re. Ravenna e Classe nel VI secolo, San Severo il tempio ritrovato*, edited by Andrea Augenti and Carlo Bertelli, 43–48. Milano.
- Cosentino, Salvatore. 2012a. "Antroponimia, politica e società nell'esarcato in età bizantina e post-bizantina." In *L'héritage byzantin en Italie (VIII – XIIe siècle)*, II, *Les cadres juridiques et sociaux et les institutions publiques*, edited by Jean-Marie Martin, Annick Peters-Custot and Vivien Prigent, 173–185. Rome.
- Cosentino, Salvatore. 2012b. "Ricchezza ed investimento della chiesa di Ravenna tra la tarda antichità e l'alto medioevo." In *From one Sea to Another. Trading Places in the European and Mediterranean Early Middle Ages / Da un mare all'altro. Luoghi di scambio nell'Alto Medioevo europeo e mediterraneo*, edited by Sauro Gelichi and Richard Hodges, 417–439. Turnhout.
- Cosentino, Salvatore. 2014. "Constans II, Ravenna's autocephaly and the panel of the privileges in St. Apollinare in Classe: A reappraisal." In *Aureus. Volume Dedicated to Professor Evangelos K. Chrysos*, edited by Taxiarchis G. Kolias, Konstantinos G. Pitsakis, Catherine Synellis, 153–169. Athens.
- Cosentino, Salvatore. 2015a. "Banking in early Byzantine Ravenna." *Cahiers de Recherches Médiévales et Humanistes* 28: 243–254.
- Cosentino, Salvatore. 2015b. "Ravenna from imperial residence to episcopal city: processes of centrality across empires." *Rechtsgeschichte/Legal History* 23: 54–67.

- Cosentino, Salvatore. 2016. "Social instability and economic decline of the Ostrogothic community in the aftermath of imperial victory: the papyri evidence." In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 133–149. London.
- Cosentino, Salvatore. 2017. "Tipologie, uomini e oggetti della mercatura ravennate tra la tarda antichità e gli Ottoni." In *L'héritage byzantin en Italie (VIII – Xlle siècle)*, II, *Les cadres juridiques et sociaux et les institutions publiques*, edited by Jean-Marie Martin, Annick Peters-Custot and Vivien Prigent, 344–362. Rome.
- Cosentino, Salvatore. 2018. "Istituzioni curiali e amministrazione della città nell'Italia ostrogota e bizantina", *Antiquité Tardive* 26: 241–254.
- Cosentino, Salvatore. 2019 forthcoming. "Goods on the move across the late antique Mediterranean: some remarks on shipping, the management of ports and trading places", in *LRCW6. 6th International Conference on Late Roman Coarse Ware, Cooking Ware and Amphorae in the Mediterranean: Archaeology and Archaeometry. Land and Sea: Pottery Routes*.
- Deichmann, Friedrich W. 1951. "Giuliano argentario", *Felix Ravenna* 56: 5–26.
- Deichmann, Friedrich W. 1976. *Ravenna. Hauptstadt des spätantiken Abendlandes*, II/2, *Kommentar*. Wiesbaden.
- Deliyannis, Deborah. 2016. "Episcopal commemoration in late fifth-century Ravenna." In *Ravenna: Its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 41–42. London.
- Delogu, Paolo. 2010. *Le origini del medioevo. Studi sul settimo secolo*. Roma.
- Ennen, Edith. 1975. *Storia della città medievale*. Roma/Bari.
- Fabbri, Paolo. 1990. "Il paesaggio ravennate dell'evo antico." In *Storia di Ravenna*, I, *L'evo antico*, edited by Giancarlo Susini, 7–11. Venezia.
- Fabbri, Paolo. 1991. "Il controllo delle acque tra tecnica e economia." In *Storia dei Ravenna*, II/1, *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 19–22. Venezia.
- Fabbri, Paolo. 2004. "L'età antica e medievale." In *Le mura nella storia urbana di Ravenna*, edited by Paolo Fabbri, 34–41. Ravenna.
- Fasoli, Gina. 1979a. "Il dominio territoriale degli arcivescovi di Ravenna." In *I poteri temporali dei vescovi in Italia e in Germania nel Medioevo*, edited by Carlo G. Mor and Heinrich Schmidinger, 87–140. Bologna.
- Fasoli, Gina. 1979b. "Il patrimonio della chiesa di Ravenna in Sicilia." *Felix Ravenna* 117: 69–96.
- Fasoli, Gina. 1991. "Il patrimonio della chiesa ravennate." In *Storia di Ravenna*, II/2, *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 389–400. Venezia.
- Francovich Onesti, Nicoletta. 2007. *I nomi degli Ostrogoti*. Firenze.
- Gelichi, Sauro. 2005. "Le mura di Ravenna." In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo), 821–840. Spoleto.
- Gelichi, Sauro. 2012. "Local and Interregional Exchange in the Lower Po Valley, Eighth-Ninth Century." In *Trade and Markets in Byzantium*, edited by Cécile Morrison, 219–233. Washington DC.
- Gelichi, Sauro. 2017. "Un mare ancora bizantino? L'Adriatico tra Ravenna e Venezia nell'alto medioevo." In *L'héritage byzantin en Italie (VIII – Xlle siècle)*, II, *Les cadres juridiques et sociaux et les institutions publiques*, edited by Jean-Marie Martin, Annick Peters-Custot and Vivien Prigent, 31–38. Roma.
- Gelichi, Sauro, Negrelli, Claudio, Ferri, Margherita, Cadamuro, Silvia, Cianciosi, Alessandra and Grandi, Elena. 2017. "Importare, produrre e consumare nella laguna di Venezia dal IV al XII secolo." In *Adriatico altomedievale (VI-XI). Scambi, porti, produzioni*, edited by Sauro Gelichi and Claudio Negrelli, 23–133. Venezia.

- Gillett Andrew, ed. 2002. *On Barbarian Identity. Critical Approaches to Ethnicity in the Early Middle Ages*. Turnhout.
- Gillett, Andrew. 2001. "Rome, Ravenna, and the last western emperors." *Papers of the British School at Rome* 69: 131–167.
- Goffart, Walter. 2006. *Barbarian Tides: The Migration Age and the Later Roman Empire*. Philadelphia.
- Gorini, Giovanni. 1992. "La zecca di Ravenna: monetazione e circolazione." In *Storia di Ravenna*, II/1, *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 209–238. Venezia.
- Guillou, André. 1969. *Régionalisme et indépendance dans l'Empire byzantin au VIIe siècle. L'exemple de l'Exarchat et de la Pentapole d'Italie*. Roma.
- Guillou, André. 1991. "Demografia e società a Ravenna nell'età esarcale." In *Storia di Ravenna*, II/2, *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 101–108. Venezia.
- Guzzetta, Giuseppe. 2015. "Monete dagli scavi 2014–2015 nel teatro antico di Catania". In *Catania antica. Nuove prospettive di ricerca*, edited by Fabrizio Nicoletti. Palermo: 573–589.
- Gwynn, David. M. 2010. "Archaeology and the 'Arian controversy' in the fourth century." In *Religious diversity in Late Antiquity*, edited by David M. Gwynn and Susanne Bangert, 229–263. Leiden/Boston.
- Halsall, Guy. 2007. *Barbarians Migrations and the Roman West, 376–568*, Cambridge.
- Haubrichs, Wolfgang. 2016. "The early medieval naming-world of Ravenna, eastern Romagna and the Pentapolis." In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 253–295. London.
- Heather, Peter. 2010. *Empires and Barbarians. The Fall of Rome and the Birth of Europe*. Oxford.
- Hendy, Michael F. 1985. *Studies in the Byzantine Monetary Economy, c. 300 – 1450*. Cambridge.
- Hendy, Michael F. 1989. "Economy and State in Late Rome and Early Byzantium: An Introduction." In M. F. Hendy, *The Economy, Fiscal Administration and Coinage of Byzantium*, London, I.
- Hendy, Michael F. 2002. "East and West: The Transformation of Late Roman Financial Structures." In *Roma fra Oriente e Occidente II*, 1307–1370. Spoleto.
- Herrin, Judith. 2015. "Imperial Palace of Ravenna." In *The Emperor's House. Palaces from Augustus to the Age of Absolutism*, edited by Michael Featherstone, Jean-Michel Spieser, Gülrü Tanman and Ulrike Wulf-Rheidt, 53–62. Berlin/New York.
- Humphries, Mark. 2012. "Valentinian III and the City of Rome (425–55): Patronage, Politics, Power." In *Two Romes. Rome and Constantinople in Late Antiquity*, edited by Lucy Grig and Gavin Kelly, 161–182. Oxford.
- Jäggi, Carola. 2013. *Ravenna. Kunst und Kultur einer spätantiken Residenzstadt*. Regensburg.
- Lazard, Sylviane. 1973. "Les noms de personne dans les papyrus ravennates du VIe siècle." *Studi Mediolatini e Volgari* 21: 7–38.
- Lazard, Sylviane. 1978. "Événements historiques et anthroponymie à Rimini de la fin du VIIe au milieu du Xe s." *Onoma*, 22: 1–15.
- Lazard, Sylviane. 1985. "Studio onomastico del «Breviarium»." In *Ricerche e studi sul «Breviarium Ecclesiae Ravennatis» (Codice Bavaro)*, 33–61. Roma.
- Maioli, Maria Grazia. 1990. "La topografia della zona di Classe". In *Storia di Ravenna*, I, *L'eva antico*, edited by Giancarlo Susini, 377–383. Venezia.
- Maioli, Maria Grazia. 2018. "Antiche acque di Ravenna." In *Il Genio delle Acque. Scavi nelle piazze di Ravenna* (DEA – Documenti e Evidenze di Archeologia, 9), edited by Chiara Guarnieri and Giovanna Montevocchi, 331–342. Ravenna.
- Mauskopf Deliyannis, Deborah. 2010. *Ravenna in Late Antiquity*. Cambridge.
- Mazza, Mario. 2005. "Ravenna: problemi di una capitale." In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo), 7–8. Spoleto.

- Morrisson, Cécile and Callegher, Bruno. 2014. "Ravenna: le déclin d'un avant-poste de Constantinople à la lumière de son monnayage", *Cahiers de Recherches Médiévales et Humanistes* 28, 2: 254–258.
- Negrelli, Claudio. 2008. *Rimini capitale. Strutture insediative, sociali ed economiche tra V e VIII secolo*. Borgo San Lorenzo.
- Neri, Valerio. 1990. "Verso Ravenna capitale: Roma, Ravenna e le residenze imperiali tardoantiche." In *Storia di Ravenna*, I, *L'evo antico*, edited by Giancarlo Susini, 535–584. Venezia.
- Orselli, Alba M. 1991. "La chiesa di Ravenna tra coscienza dell'istituzione e tradizione cittadina." In *Storia di Ravenna*, II/1, *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 405–422. Venezia.
- Ortengberg West-Harling, Veronica. 2015. "Proclaiming power in the city: the archbishops of Ravenna and the doges of Venice". In *Urban Identities in Northern Italy (800–1100 ca.)* [Seminari SAAME, 5], edited by Cristina La Rocca, and Pietro Majocchi, 219–249. Turnhout.
- Petrini, Francesco M. 2011. "Il 'potere ariano' in Italia da Ricimero a Totila." In *Politiche religiose nel mondo antico e tardoantico. Poteri e indirizzi, forme di controllo, idee e prassi di tolleranza*, edited by Giovanni A. Cecconi and Chantal Gabrielli, 339–357. Bari.
- Pietri, Charles. 1991. "L'aristocrazia e clero al tempo di Odoacre e di Teoderico." In *Storia di Ravenna*, II/2, *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 217–310. Venezia.
- Pohl, Walter. 2008. "Rome and the Barbarians in the 5th Century", *Antiquité Tardive*, 16: 93–101.
- Prigent, Vivien. 2014. "Le «mythe du mancus» et les origines de l'économie européenne." *Revue numismatique*, 171: 701–728.
- Prigent, Vivien. 2016. "A striking evolution: the mint of Ravenna during the early middee ages." In *Ravenna: Its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 151–161. London.
- Reddé, Michel. 2001. "Le rôle militaire des ports de l'Adriatique sous les Haut-Empire", *Strutture portuali e rotte marittime nell'Adriatico di età romana*, Roma (= *Antichità Altoadriatiche* 46) 43–54.
- Rinaldi, Rossella. 1996. "Le origini dei Guidi nelle terre di Romagna (secoli IX-X)." In *Formazione e strutture dei ceti dominanti nel medioevo: marchesi, conti e visconti nel Regno Italico (sec. IX-XIII)*. Nuovi Studi Storici, 39, 211–240.
- Ruggini, Lellia. 1959. "Ebrei ed Orientali nell'Italia settentrionale fra il IV e il VI secolo d. C." *Studia et Documenta Historiae et Iuris*, 25: 186–308.
- Schoolman, Edward M. 2016. "Nobility, aristocracy and status in early medieval Ravenna", In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson 224–238. London.
- Smith, Adam 1976. *An Inquiry into the Nature and Causes of the Wealth of Nations*. In *The Works and Correspondence of Adam Smith*, I, edited by William B. Todd, Andrew S. Skinner and Knud Haakonssen, 330–349. Oxford.
- Sotinel, Claire. 2008. "Ariani e cattolici a Ravenna." In *Roma e i barbari. La nascita di un nuovo mondo*, edited by Jean-Jacques Aillagon, 383–384.
- Susini, Giancarlo. 1959–1960. "Gli argentari di Ravenna", *Atti e Memorie della Deputazione di Storia Patria per le Province di Romagna*, n. s., 11: 153–158.
- Urbano, Arthur. 2005. "Donation, dedication, and *damnatio memoriae*: The catholic reconciliation of Ravenna and the Church of Sant'Apollinare Nuovo", *Journal of Early Christian Studies* 13/1: 71–110.
- Van Dam, Raymond. 1993. *Saints and Their Miracles in Late Antique Gaul*. Princeton.
- Vespignani, Giorgio. 2001. *La Romània italiana dall'Esarcato al Patrimonium. Il Codex Parisinus (BNP, N.A.L. 2573) testimone della formazione di società locali nei secoli IX e X*. Spoleto.

- Vespignani, Giorgio. 2005. "Il circo di Ravenna *regia civitas* (secc. V–X) In *Ravenna da capitale imperiale a capitale esarcale*, I (Atti del XVII Congresso Internazionale di Studio sull'Alto Medioevo), 1133–1142. Spoleto.
- Ward-Perkins, Bryan. 2010. "Where is the archaeology and iconography of Germanic Arianism?" In *Religious diversity in Late Antiquity*, edited by David M. Gwynn and Susanne Bangert, 265–281. Leiden/Boston.
- Zangara, Vincenza. 2000. "Una predicazione alla presenza dei principi: la chiesa di Ravenna nella prima metà del sec. V." *Antiquité Tardive* 8: 265–304.

Isabella Baldini

4 The Toilsome Journey of Marbles and Stones

Abstract: A general analysis of the use of marble in Ravenna between the 5th and the 6th century will consider in a Mediterranean perspective the modes in which marble and stone material were acquired and utilised. Furthermore, depending on the periods and patrons with adequate economic and cultural resources, it is possible to distinguish different phenomena in supplying and using marbles for the public buildings of the city, comprehending both *spolia* and commissioned artefacts. The political situation and the range of economic activities influenced time by time the architectural and decorative choices, attempting adaptations to the models and creating local styles.

Between the end of the 5th and 6th centuries, more than 1,500 tons of marble were shipped from Constantinople to Ravenna to serve in the construction of ecclesiastical structures. If we consider that this calculation, carried out by J. Harper approximately twenty years ago,¹ excludes elements of liturgical furniture such as ambos, slabs, transennae, revetments used to decorate the walls and floors, as well as the city's conspicuous series of sarcophagi, the overview reveals a truly sizeable trade in marble and stone. This phenomenon did not only concern quantity: while it is true that the choice of material was partially conditioned by the relative facility in which objects made of Proconnesian marble were able to be obtained and transported from the island located in the Sea of Marmara, it also presents aspects connected with the prestige associated with the location from which it was sourced. A significant instance illustrating the high regard connected with the use of this material recalls how the Church of Thasos, an island which numbered amongst the major exporters in Late Antiquity of a marble similar to the microasiatic type, had towards the end of the 4th century a bishop who, despite the availability of local material, opted to procure slabs of Proconnesian marble for use in the construction of an early christian basilica.²

The transport of architectural furnishings is a phenomenon that has been well-documented in textual sources. One example found in the seventh century *Miracula S. Demetrii* recounts how a bishop of Tina, Tunisia, who was desirous of

¹ Harper 1997, 146. The estimate made by J.G. Harper about the Proconnesian transport in the decades between 490 and 570, leads to a rough valuation of 1,556 tons.

² Gregorius Nazianzenus, *Carmen de Vita Sua*, in PG 37, c. 1089. On the exportation of the marble of Thasos: Sodini/Kolokotsas 1984; Barbin/Herrmann 1993; Herrmann/Barbin/Mentzos 1999; Kozelj/Wurch-Kozelj 1999.

imitating St. Demetrius in Thessaloniki, was able to obtain for his own church the entire contents of a ship bearing marble elements. Despite their having been originally destined for use at a different location, the saint's intervention ensured the miraculous delivery of columns, an ambo, and a ciborium, all of which were packed in straw and oakum for transport.³

In some cases, the archaeological documentation concerning naval shipments appears to correspond to the information conveyed by these historical sources. For instance, the famous shipwreck of Marzamemi dating to the Justinian Age, which emerged off the coast of Syracuse included twenty-eight bases, columns, and Corinthian capitals, as well as twelve slabs, pilasters, and smaller columns in Proconnesian marble. Additionally, the shipment contained one altar *mensa* carved from white marble and all of the elements necessary for an ambo featuring two stairs made of Green Thessalian stone.⁴ While a complete count has never been executed, studies on specific areas and categories of manufactured objects such as capitals⁵ or ambos⁶ appear to denote an economic phenomenon that was truly considerable and which would have reached all regions of the Mediterranean.

The primary difficulty in conducting a case-study impacting an area this vast is pinpointing homogenous situations in which the phenomenon regarding the transportation of marble from the East can be analysed through a prolonged period of time, consequently enabling the creation of an adequate base of knowledge, capable of being studied in relation to other sites. In this sense Ravenna is one of the most complete and interesting case-studies, notwithstanding the difficulties which can arise from a diachronic reading of its structures, and despite the well-known gaps in documentation.

While it is impossible to make a complete estimate of the imported elements as compared to those which were not, it is undoubtedly significant that of the 146 columns analysed in the *corpora* of churches by F.W. Deichmann, an astonishing 120

3 Magoulias 1976, 11–35; Lemerle 1979, 234–241; Lemerle 1981, 163–169; Sodini 1989, 170; Bakirtzis 2000, 1449–1454.

4 On the shipwreck of Marzamemi: Kapitän 1969; Kapitän 1971; Kapitän 1980; Bohne 1998; Castagnino Berlinghieri/Guzzardi 2014; Marsili 2015, 369–376; Paribeni./Castagnino Berlinghieri 2015. For the Byzantine shipwrecks and the commerce of Proconnesian marble, see Barsanti 1989; Kozelj/Wurch-Kozelj 1993; Asgari 1995, 263–288. Sodini/Barsanti/Guiglia Guidobaldi 1998; Barsanti 2002; Günsenin 2002; Makris 2002; Pensabene 2002; Pensabene 2004, 433; Kingsley 2004; Marano 2008; Castagnino Berlinghieri/Paribeni 2011; Russell 2012; Paribeni 2013; Russell 2013a; Russell 2013b; Castagnino Berlinghieri/Paribeni 2015; Pensabene 2015. On the transfer of the workers: Sodini 1989; Russo 2010b.

5 See, for example, Kautzsch 1936; Deichmann 1981; Pralong 1993; Asgari 1995; Pralong 2000; Pensabene 2002; Beykan 2012.

6 On the ambos see, for example: Jakobs 1987 (Greece); Minguzzi 1992 (Venice); Iațcu 2013 (Scythia).

of them were determined to be of Proconnesian marble.⁷ There are also entire series of reused manufactured objects, imported material from the Istrian coast and the subalpine zone; marks indicating workshops of Eastern provenance are present,⁸ however there is also evidence of local workmanship. Additionally, sources have also testified to the presence of specialized artisans from Rome. Therefore, this concerns a complex phenomenon of manufacture (Fig. 1), whose development can be followed at least in part by means of documentation in both written and material form.



Fig. 1: Ursiana Cathedral, ambo of bishop Agnellus (photo Baldini).

In the years following the transfer of the court from Milan to Ravenna in 402, an initial phase shows a prevalent phenomenon involving of the reutilisation of architectural material, to which only a few complementary elements were then added, these having been acquired expressly for the building's construction.

This situation is easily illustrated by the *Ursiana* Cathedral, which was demolished during the 18th century to make way for the present-day Duomo.⁹ While the exact architectural furnishings of the original church remain unknown, a 17th century manuscript by Lorenzo Calegati cites 48 columns which were “rather uneven both in width

⁷ Deichmann 1969; Deichmann 1974; Deichmann 1976; Deichmann 1989; Harper 1997, 132 (taking in account the cathedral and the churches of San Francesco, Santo Spirito, Sant'Apollinare Nuovo, Sant'Apollinare in Classe and San Vitale). See also Marano 2008, 163.

⁸ For a *Corpus* of the site-marks, see Marsili 2019.

⁹ Deichmann 1974, 3–13; Novara 1997; Zanotto 2007, 71–75; Verhoeven 2011, 27–29; Cirelli 2008, 214–215; Mauskopf Deliyannis 2010, 84–88.

and length". Likewise, he states that the capitals were "of varying sorts and each one dissimilar from the other".¹⁰ The presence of impost blocks was described in an illustration by G.F. Buonamici in the first half of the 18th century (Fig. 2).¹¹ In consequence, despite the difficulties involved with chronological contextualizing the placement of the architectural elements, the existence of a practice of reutilising columns and capitals can be hypothesized, with impost blocks having been commissioned *ad hoc*.

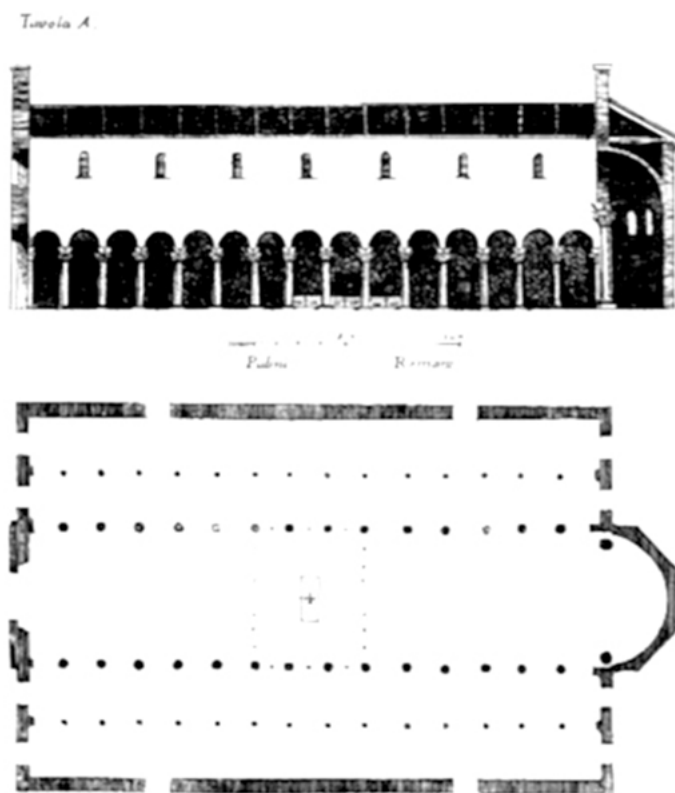


Fig. 2: Ursiana Cathedral, section of the church (from Buonamici 1748).

It is likely that the church of St. Lawrence, located in a suburb of Ravenna called Cesarea, embodied a similar character: a few sculptural architectural elements of

¹⁰ The text, preserved at the Archivio Arcivescovile di Ravenna (*Diversorum*, t. LVI, 185), is reported by G. Bovini: Bovini 1953, 70–71 ("alquanto disuguali sì in grossezza che in lunghezza"; "di varie sorti e tutti dissimili uno dall'altro").

¹¹ Buonamici 1748; Novara 1997, 68–76, with bibliography.

Imperial quality have survived, including two columns of Cipollino marble.¹² Within this same complex, which also contained a *monasterium* dedicated to Saints Gervasius and Protasius, an artefact was originally positioned which remains as a testimony in marble to the importance of the initial “Imperial” trade in the sector of funerary sculpture between Constantinople and Ravenna: a monumental sarcophagus made of Proconnesian marble dating to the last decade of the 4th century featuring the *Traditio Legis*, the Annunciation, the Meeting of Peter and Paul, and two symbolic animals on the sides of the *kantharos* (Fig. 3).¹³



Fig. 3: Constantinopolitan sarcophagus reused by the Pignatta family (photo Baldini).

Within the church of San Giovanni Evangelista, constructed between 426 and 450 by empress Galla Placidia as an *ex voto* after surviving a dangerous storm,¹⁴ the architectural elements included recycled bases, columns and capitals,¹⁵ while the impost blocks, numbering twenty-four, were realized *ex novo* for the building (Fig. 4). The accounts regarding this cathedral consist of only indirect sources, but this is surely the first case for which documentation exists of architectural sculpture being

¹² Regarding the complex: Deichmann 1976, 336–340; Baldini Lippolis 2003; Mauskopf Deliyannis 2010, 61–62; Rizzardi 2011, 61–63.

¹³ Baldini Lippolis 2003.

¹⁴ Deichmann 1974, 93–124; Farioli Campanati 1991, 251; Verhoeven 2011, 32–34; Mauskopf Deliyannis 2010, 63–70; Rizzardi 2011, 55–60.

¹⁵ Deichmann 1974, 103–104; De Maria 2000; Zanotto 2007, 90–111.



Fig. 4: Church of San Giovanni Evangelista, interior (photo Baldini).

directly imported from Constantinople, even if the church also contained many reutilized elements within.

One set of sculptural apparatus which was completely commissioned from the capital in the East is the *Apostoleion* (the present-day church of San Francesco), constructed during the episcopacy of Bishop Neon. This was also the place of interment for some of Ravenna's more prominent clergymen and leading members of the city's élite during Late Antiquity (Fig. 5).¹⁶ There are two sarcophagi preserved within the building (one of which is presently used as a main altar), (Fig. 6) which were imported from Constantinople and feature the *Traditio Legis*, niches, and apostles. These, together with the Pignatta sarcophagus from St. Lawrence, would constitute the first models for the flourishing development of the Ravennate school of funerary sculpture.¹⁷

The twenty-four bases, columns, capitals, and impost blocks from the *Apostoleion* made of Proconnesian marble are homogenous both in terms of material and workmanship. This choice of architectural material is especially significant given Ravenna's panorama: the decision could have been determined, at least in part, by a lesser availability of reusable architectural material within the city, but it is also probable that a willingness to adapt to other, more prestigious architectural models also played a significant role. This would have been in accordance with a phenomenon which was to occur in Ravenna with an even greater intensity during the reign of Theoderic and

¹⁶ Bovini 1964; Deichmann 1976, 309.; Baldini Lippolis 1997–2000; Mauskopf Deliyannis 2010, 102–103; Verhoeven 2011, 41–42; Novara 2016.

¹⁷ Bühl 1995, with bibliography.



Fig. 5: Church of Sts. Apostles, interior (photo Baldini).

would reach its apex during the age of Justinian. The significance of this being the first instance of the Imperial court determining the architectural choices and providing the means for their construction cannot be overlooked. The intention clearly having been to promote the reigning family's role in society, as well as to strengthen the bonds between Ravenna and the eastern capital, as reflected by the dedication of San Giovanni Evangelista and the positioning of the church near the port.

This aspect of dependence upon the cultural modes of the Bosphorus appears even more pertinent during the following decades, particularly standing out when one juxtaposes the Arian cathedral, which was probably constructed in the early years of Gothic dominion, and the palatine church dedicated to the Saviour during this period of Arian rule.

In the first building (Fig. 7)¹⁸ bases, columns, capitals, and impost blocks are of varying types of material and are probably of the work of craftsmen from Ravenna or northern Italy: in particular, the capitals, like the ambo featuring two stairs (Fig. 8),¹⁹

¹⁸ Deichmann 1974, 247–248; Cirelli 2008, 92–93; Mauskopf Deliyannis 2010, 174–177.

¹⁹ Deichmann 1974, 249–250.



Fig. 6: Constantinopolitan sarcophagus reused as mail altar of the church (photo Baldini).



Fig. 7: Santo Spirito (Arian cathedral), interior (photo Baldini).



Fig. 8: Santo Spirito, the ambo (photo Baldini).

are of Istrian stone, the same type utilised in the Mausoleum of Theoderic. The material's area of provenance is firmly connected with the Gothic kingdom's commercial trade, which included the importation of olive oil and wine, so much that it was called: "The Campania of Ravenna: the Imperial city's congenial and extremely pleasant pantry" ("*Ravenna Campania: urbis regiae cella penaria, voluptuosa nimis et deliciosa*").²⁰ The building stands out due to the local nature of its materials and manufacture, despite its having been inspired by models in Constantinople in its typological aspects and architectural elements. It could be hypothesized that the motive behind the choice made against the importation of architectural furnishings from the East was dependent upon economic factors, or perhaps it was reliant upon the supply system of material, as well as the nature of the relationship of the day between the Gothic realm and Constantinople.

²⁰ Cassiodorus, *Variae* XII, 22 (dated to 537–538).

In the case of the mausoleum,²¹ the decision to utilise stone from the Istrian caves for its masonry is directly related to the realisation of a truly intrepid project, which called for an enormous monolithic hemisphere weighing more than 250 tons to serve as the structure's roof, the *saxus ingens* cited by the Anonymous Valesianus (Fig. 9).²² For this building, an affinity can possibly be observed between the choice of such a particular architectural form and the instructions Theoderic issued regarding his funerary costume, in which the Gothic King hoped for the abandonment of a custom involving the laying down of one's trousseau wrought in precious metal, in favour of a model expressly representative via the external decoration of the sepulchre with columns and marble.²³



Fig. 9: Theoderic's Mausoleum, monolithic capstone (photo Baldini).

The Gothic king's interest in funerary settings and regulations is also evident in a related episode involving a sculptor named Daniel, whose ability consisted in the "carving and decoration of marbles" ("*in excavandis atque ormandis marmoribus*").²⁴ It was to this person that Theodoric in 509–510 issued an authorisation in the managing of production and sales of sarcophagi in Ravenna, in an attempt to avoid excessive speculation in this sector.

²¹ Deichmann 1974, 211–239; Mauskopf Deliyannis 2010, 124–136.

²² *Excerpta Valesiana* II, 96.

²³ Cassiodorus, *Variae* IV, 34.

²⁴ Cassiodorus, *Variae* III, 19.

At any rate, the Arian cathedral and the mausoleum constitute an architectural area of interest within themselves when compared to other buildings erected during the same period. In general, the need to economize is the prevailing factor, as apparent in the use of *spolia*. According to common practice, marble elements and columns from a variety of locations (*Histonium*,²⁵ presently Vasto, *Faventia*²⁶) as well as from the *domus Pinciana* in Rome²⁷ were requested for use in Ravenna's buildings. In a letter from Cassiodorus, for the *basilica Herculis*, Theoderic asks Agapitus, the *praefectus urbi* in Rome, to send a team of *marmorarii*, or craftsmen who excelled in recomposing separate sheets of marble to Ravenna, aligning the sections in a manner that would imitate and play upon the material's natural veining, the result of which would have drawn praise for their natural resemblance ("*qui eximie divisa coniungant, ut venis coludentibus illigata naturalem faciem laudabiliter mentiantur*").²⁸ Regarding this same monument, which has unfortunately since been destroyed, it has been hypothesized that it once featured a bas-relief currently housed at the Museo Nazionale in Ravenna (Fig. 10) made of Proconnesian marble which depicts the labours of Herakles.²⁹ One should not exclude the probability that the marble slabs described by Cassiodorus arrived from Rome along with the *marmorarii*, in a scenario which would better explain the necessity for artisans from Rome. Otherwise, this construction could testify to a case involving the importation of an entire set of decorative marbles from the Eastern capital.

From these examples, a composite and heterogeneous architecture begins to appear, with an attempt made to balance the economic factor with the representative tone of the monuments. The importance assigned to the palatine church of the *Theodericianum* (Sant'Apollinare Nuovo)³⁰ also emerges in a meaningful manner, as evidenced by the fact that all of the internal architectural elements (bases, columns, capitals, as well as impost blocks) are composed of Proconnesian marble of the highest quality (Fig. 11).

Likewise the ambo, of the same type of marble, was certainly sculpted in Constantinople and can be compared to the finest productions from the capital's workshops (Fig. 12).³¹

The investment made in the architectural outfitting in marble for the church of Sant'Apollinare Nuovo,³² computable to at least 94 tons of marble material, characterizes

²⁵ Cassiodorus, *Variae* III, 9.

²⁶ Cassiodorus, *Variae* V, 8.

²⁷ Cassiodorus, *Variae* III, 10. Anguissola 2002.

²⁸ Cassiodorus, *Variae* I, 6.

²⁹ Kennell 1994; Farioli Campanati 2005, 15–16; Mauskopf Deliyannis 2010, 123; Russo 2010a.

³⁰ Deichmann 1974, 127–189; Penni Iacco 2006; Mauskopf Deliyannis 2010, 146–174; Verhoeven 2011, 43–45.

³¹ Vernia 2005, with bibliography.

³² Farioli Campanati 1991, 251.

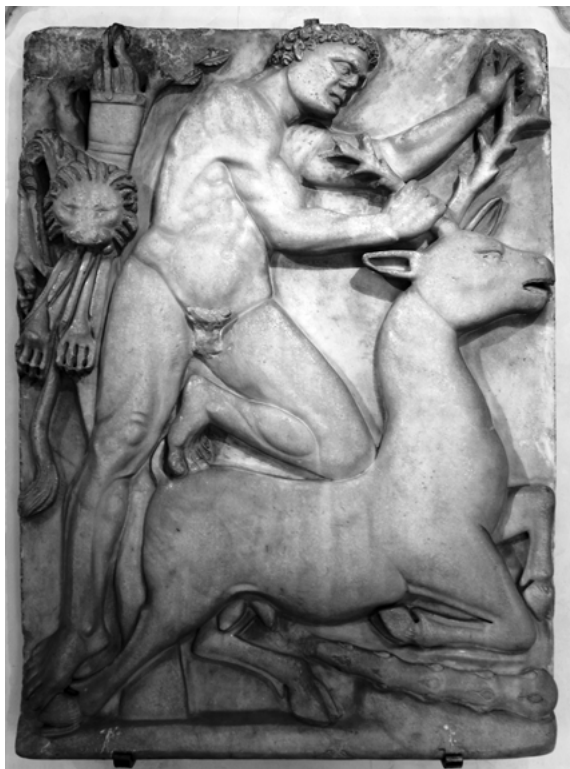


Fig. 10: Museo Nazionale, marble panel with Herakles and the Stag of Ceryneia (photo Baldini).

a willingness to realise a monument of an extremely high standard and worthy of a court finding itself confronted with monumental forms. These forms prescinded the local tradition when it came to both material and models to base itself upon, something that was made even more evident in the mosaics displayed upon the church's walls.³³

With this structure, the Theoderician rule signalled an effective turning point regarding its profuse economic commitment, establishing a practice – which was already present in Ravenna – of importing marble from the East. For example, in 534 a Praetorian prefect from Ravenna requested Justinian's attention in the name of Amalasuntha and Theodahad in order to facilitate the arrival of the "*marmora vel alia necessaria*" ordered by the two Gothic sovereigns from Constantinople. Unfortunately, the transaction remained unfulfilled due to the death of Calogenitus, the *portitor*

³³ Rizzardi 2011, 87–105.

³⁴ Cassiodorus, *Variae* X, 8, 2.



Fig. 11: Sant'Apollinare Nuovo, capital (photo Baldini).



Fig. 12: Sant'Apollinare Nuovo, the ambo (photo Baldini).

(the bearer of the letter) charged with effectuating the purchase.³⁴ After the end of Gothic rule, the Church of Ravenna once again assumed the primary responsibility of erecting public buildings of a religious nature: while the episcopacy of Agnellus focused its attention on ideological aspects and the censure of images related to the buildings' Arian past, the period of Archbishop Maximian would be known for undertaking the largest building projects that Ravenna would conceive during Late Antiquity.

The church of San Vitale was built around 540–548, with construction initially ordered by Bishop Ecclesius. It would eventually be completed by Maximian,³⁵ thanks to a payment of 26,000 *solidi aurei* paid by a banker named Julianus.³⁶ Its interior would necessitate an extraordinary 188 tons of marble,³⁷ not including elements such as enclosures (slabs, transennae) and liturgical furniture (Fig. 13).



Fig. 13: San Vitale, galleries (photo Baldini).

This is the building with the largest amount of marble manufactured objects in Ravenna; in this sense it is the most expensive monumental structure, even when one does not consider the costs involved in the production of its precious mosaics. The high sum paid by Julianus for the completion of the work doubtlessly reflects the complexity of the construction process, which included everything from the acquisition of building material to the sculptural apparatus, decorative elements and labour.

³⁵ Deichmann 1969, 226–256; Deichmann 1976, 47–232; Mauskopf Deliyannis 2010, 223–250; Rizzardi 2011, 128–146; Verhoeven 2011, 46–49.

³⁶ Cosentino 2006; Cosentino 2014a.

³⁷ Harper 1997, 145.

The project in and of itself was more expensive than the approximately coeval Basilica at Classe (532–549),³⁸ for which 150 tons of Proconnesian marble in the form of architectural elements were imported, including bases, columns, capitals, and impost blocks (Fig. 14).³⁹ As far as the liturgical furniture was concerned, the case of the main altar's ciborium decisively reflects the complexity of the sequence of events which were involved in the church since its initial construction. By referring to written texts and archeological data, it is possible to reconstruct at least five interventions enacted upon this object. Two “two-zone” capitals similar in dimension, form and style from the Museo Arcivescovile (Fig. 15)⁴⁰ may possibly be associated to the first ciborium: a ram's horn fragment currently housed in the Museo Nazionale, which was originally unearthed from beneath the seventeenth-century floor to the right of the crypt located within the presbytery, has been confirmed as having originated from one of these capitals.⁴¹ In this case, when reconstructed, the ciborium would correspond by typology to those in the episcopal churches at Gortyn (6th century)⁴² or Poreč (13th century, with capitals from 549–560).⁴³ It is



Fig. 14: Sant'Apollinare in Classe, “windblown” capital (photo Baldini).

38 Deichmann 1969, 257–278; Deichmann 1976, 233–282; Mauskopf Deliyannis 2010, 259–274; Rizzardi 2011, 146–165; Verhoeven 2011, 50–52.

39 Harper 1997, 145.

40 Novara 2011.

41 Pavan 1978, 255.

42 Inv. 6369. Baldini 2000, 1140.

43 Russo 1991.



Fig. 15: Museo Arcivescovile, “two zone” capital (photo Baldini).

difficult to establish whether the ciborium shown in the so-called Panel of the Privileges can be dated to the 6th century (Fig. 16), as per the chronological dating proposed by Corrado Ricci for this portion of the mosaic,⁴⁴ or rather to the reworking of this section done during the second half of the 7th century, when the scene would have assumed a strong propagandist meaning meant to favor the Church of Ravenna.⁴⁵ The structure depicted in the mosaic in gold and silver, topped with a cross, presents a characteristic roof in the shape of a hemisphere, which is also seen in variant forms at the Katapoliani of Paros (6th century),⁴⁶ at St. Euphemia in Constantinople,⁴⁷ and in a votive structure rendered in Proconnesian marble (6th century) today kept in the Treasury of San Marco in Venice.⁴⁸ Consequently, that form is compatible with a dating from either the 6th or 7th century, making this method of analysis difficult to resolve problems relating to its chronology.

⁴⁴ Ricci 1935.

⁴⁵ Cosentino 2014b: the partial reconstruction of the mosaic during the episcopate of Reparatus would belong to the offering of the ciborium by exarch Theodorus (678–687). The gift of a ciborium recurs in Ravenna in the basilica Ursiana (a ciborium made of silver, at the behest of archbishop Victor, in the first half of the 6th century). In the church of St. Peter in Rome, exarch Eutichius offered a ciborium in the first half of the 8th century.

⁴⁶ Jewell/Hasluck 1920.

⁴⁷ Naumann/Belting 1966, 95–98.

⁴⁸ Inv. n. 9.



Fig. 16: Sant'Apollinare in Classe, so-called Panel of the Privileges, ciborium (photo Baldini).

It is possible to attribute a restoration of the altar and ciborium to the time of archbishop John the Younger (John VI: 774–784), a treatment which consisted of gilding the marble in silver and the placement of a bejeweled cross above, as reported by Vitale Acquedotti (1512) who transcribed the text from a ninth-century epigraph located above the marble ciborium.⁴⁹ This intervention was in fact done by order of the archbishop Dominicus Ublatella (889–897), who was also responsible for the construction of the church's crypt, which was destined to host the patron saint's relics.

In 1637, four columns of black Aquitania marble located within the presbytery of Sant'Apollinare, were acquired by Virgilio Spada.⁵⁰ They were eventually returned, permitting abbot Gabriel Maria Guastuzzi to comment upon them before the demolition of 1723.⁵¹ This layout of the main altar was maintained until 1908, when

⁴⁹ Mazzotti 1954, 84.

⁵⁰ Mazzotti 1954, 94.

⁵¹ Mazzotti 1954, 100. It is possible that those items came from the nearby basilica of San Severo, in which a document of 1465 testifies the presence of "*columnae nigrae*" between the materials set aside by the Venetians.

Corrado Ricci had these supports removed and placed on the sides of the lateral doors of the basilica, where they can still be seen (Fig. 17).⁵²



Fig. 17: Sant'Apollinare in Classe, columns of black Aquitania marble (photo Baldini).

Apart from the high altar's ciborium, in the 16th century there existed in the center of the basilica a second ciborium dedicated to the Virgin with columns of porphyry. Vitale Acquedotti, in his transcriptions of epigraphs still visible in his time, recorded a dedication to Ursus, the abbot of the monastery in Classe, in an inscription upon the structure dating from the time of archbishop Dominicus Ublatella.⁵³ On the other hand, the position of the altar's base in the center of the basilica coincided with the location of the transfer of the burial of Saint Apollinaris from the exterior to the interior of the basilica by the archbishop Maurus (642–671), according to the testimony of Agnellus.⁵⁴

⁵² Mazzotti 1954, 112.

⁵³ Mazzotti 1954, 84.

⁵⁴ *LPRa* 34.

In 1953 excavations conducted by Mazzotti in the vicinity of the base which sustained the altar appeared to verify the Agnellus' testimony: it was verified that beneath the great slab only one construction composed of stone conglomerate was found, without a trace of burial beneath it.⁵⁵ However, the analysis of this decorated base of Proconnesian marble and the traces of reworking to which it was subjected over time (Fig. 18), could suggest a different meaning. Indeed, the measurements of the structure appear to coincide with those reconstructed for the Roman sarcophagus believed to be the tomb of Saint Apollinaris, whose lid featuring a pitched roof with acroteria was unearthed by Mazzotti during his excavation of the crypt.⁵⁶

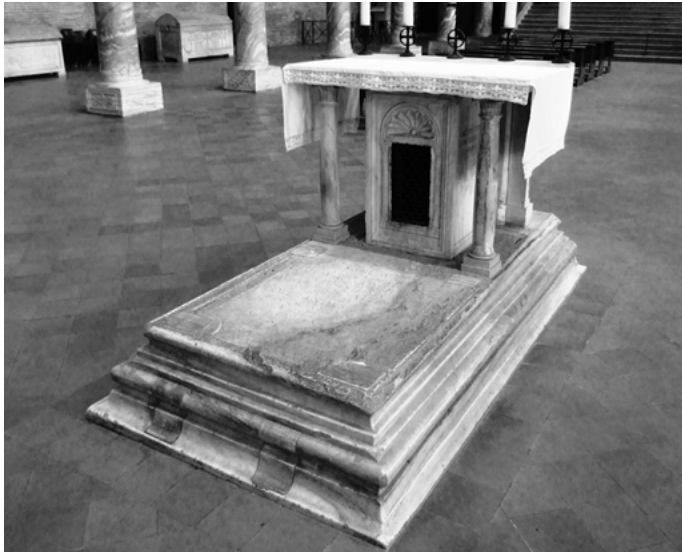


Fig. 18: Sant'Apollinare in Classe, altar in the main nave (photo Baldini).

An exhibition of the funerary monument of the first bishop of Ravenna (Fig. 19) could concurs with practice in the Near East and Ravenna (San Severo in the period of bishop John Romanus, 578–595).⁵⁷ This reconstruction explains not only the precise reference Agnellus makes regarding its location *in medio templi*, but it appears to coincide with as much exactness as possible with a later story regarding the burial site: it was transferred in the 9th century to the interior of the crypt immediately upon its completion

⁵⁵ Mazzotti 1954, 89–91.

⁵⁶ Mazzotti 1986, 216.

⁵⁷ LPRa 29.

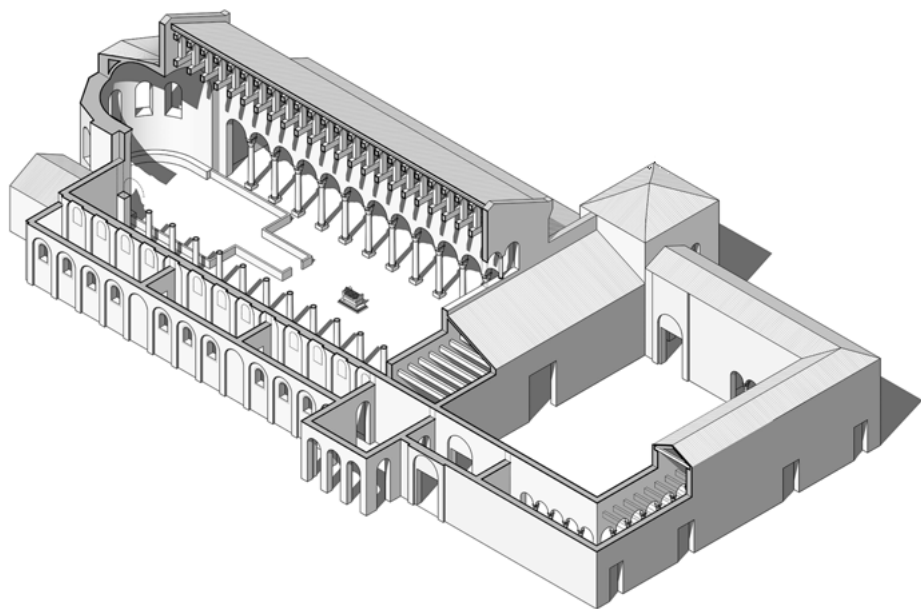


Fig. 19: Proposal of the 6th century position of the sarcophagus of St. Apollinaris (arch. C. Lamanna).

and was later the subject of the celebrated *inventio* of 1173 meant to establish the presence of the relics of Saint Apollinaris inside the basilica in Classe.

One last observation concerns the spreading of marble material that was once present within the church. As Andreas Agnellus writes, because of the marbles it shined “day and night”.⁵⁸ The dispersion covers an extremely vast geographical area, as demonstrated by examples such as the tale of the porphyry slab described by Andreas Agnellus in his account of the burial of the bishop Maurus (642–671),⁵⁹ which was originally located at the far northern end of the narthex: it was said to shine like glass, so much that it reflect the exterior of the church from the side of the basilica of San Severo (hence, towards the north). Twelve years earlier, during the time of bishop Petronace (817–835), the object had been removed by Lothair and taken to France wrapped in wool and packed in a wooden crate in order to serve as an altar *mensa* for a place only identified vaguely as Saint Sebastian. Agnellus himself was charged with ensuring the slab’s intact and damage-free arrival, a charge he was not enthusiastic to carry. The connection between this episode and a shipment organized by Louis the Pious to the papal court in Italy remains unexplained, in which Lothair, together with Ilduin, abbot of St. Denis, were involved. This last

⁵⁸ *LPRa* 24.

⁵⁹ *LPRa* 34. A different reading in Mauskopf Deliyannis 2010, 298.

person was able to convince Pope Eugene II (824–827) to give him relics related to St. Sebastian.⁶⁰

Upon his return to France in 826, these were deposited in the famous abbey of St. Médard in Saisons, where they were placed together with those of the abbey's titular saint.⁶¹ When one reconstructs the context of the situation, it becomes easy to understand the motivation on the part of Agnellus to omit certain evident particulars, given the notoriety of the episode and the context of the monuments being referred to. One can also comprehend the sense of the removal of the great porphyry slab by Lothair, which was committed in the tradition of spoliation of marble material destined for reutilization in imperial sites as already done previously by Charlemagne, and a willingness to contribute a precious gift to a location that was also known for its possession of prestigious relics of Saint Sebastian.

Unfortunately, it must be added that there now remain no traces of this marble slab from Ravenna: history records that the monastery of Saisons was the subject of numerous destructive attacks, the final one occurring during the French Revolution, which saw it completely razed to the ground. To add to the story of the marble slab, it is interesting to note that, as with the chronology of the story recounting the events, Agnellus' text can be dated approximately to 838.

The long development of the liturgical apparatus of Sant'Apollinare in Classe is one of the best expressions of the importance of the local Church over time. In the 6th century phase, Julianus *argentarius* also intervened to economically sustain the church, and the same happened with the basilica of San Michele *in Africisco*,⁶² which he financed together with his relative, Bacauda. While few elements of architectural sculpture remain of this basilica, those that remain completely correspond to the typologies utilised in Constantinople during the same period,⁶³ a signal of their commitment to follow the latest architectural trends.

Both the churches of San Vitale and Sant'Apollinare were consecrated during the episcopacy of Maximian, to whom Andreas Agnellus also attributes the acquisition of marble from Constantinople for use in the churches of St. Stephen (550)⁶⁴ and St. Andrew (560).⁶⁵ An anecdote which relates to the first of these two buildings recounts how an insufficiency of architectural and building material arose while the archbishop was away on a trip to the capital, whereupon after just one night there was a sudden, unexpected appearance of a supply, all thanks to his intervention. This demonstrates the close relationship between the governing clergyman's

⁶⁰ Geary 1990, 46.

⁶¹ *Annales regni Francorum*, ad a. 826.

⁶² Deichmann 1969, 220–225; Deichmann 1976, 35–45; Mauskopf Deliyannis 2010, 250–254; Rizzardi 2011, 123–128.

⁶³ Porta 2007.

⁶⁴ *LP Ra* 72–73. Deichmann 1976, 372–374; Mauskopf Deliyannis 2010, 255–256.

⁶⁵ *LP Ra* 76. Deichmann 1976, 306; Harper 1997, 141; Mauskopf Deliyannis 2010, 256.

personality and prestige, and the importation of the material, which in this case was possibly commissioned personally by Maximian himself, as the tale implies. Another example dating just previous to this event concerns Lawrence, the bishop of Siponto, who was able to obtain material and artisans (*doctissimi artifices*) from the emperor in the East for the construction of a church and baptistry.⁶⁶

What makes the St. Stephen episode so exceptional is when one considers the amount of time required for an order of marble to undertake its voyage. The minimum amount of time estimable for a journey to be completed from Constantinople to Ravenna (1,270 nautical miles) was approximately nine or ten weeks,⁶⁷ hence taking (between departure and return) the entire summer season, which was the one utilized for navigation.⁶⁸

The shipping cargo,⁶⁹ an estimate based upon data inferable from the naval shipments of Marzamemi (66 to 67 metric tons + the vessel),⁷⁰ was in the 6th century equal to approximately 60 tons: in order to transport the 188 tons of architectural elements utilised in San Vitale as well as the addition of material related to the liturgical furnishings, at least four vessels would have been necessary, whereas an inferior number would have been needed for Sant'Apollinare in Classe (three) or for Sant'Apollinare Nuovo (two). While archaeological documentation may be lacking, the possibility that even larger ships were used cannot be excluded,⁷¹ such as the one which foundered near the Isola delle Correnti (Calabria) with an estimated cargo of 350 tons.⁷²

By the late antique period the collection of imported marble in Ravenna was probably already being undertaken in a northern quarter of the city memorialised by the toponym *marmorata*, in reference to the church of St. Stephen⁷³ and to another church dedicated to St. John the Baptist, as documented by a text written around 1017.⁷⁴ This latter church was located outside of the *Guarcinorum* (S. Vittore) and *Anastasia* Gates, at the intersection of the Padenna and a canal which flowed from the eastern port, near one of the principal roads of the city, the *platea Maior*. It is particularly indicative

⁶⁶ Campione 2004, with bibliography.

⁶⁷ According to Andreas Agnellus, nobody would be able to go and come back from Constantinople in less than three months, as shown specifically in reference to the story of the priest John of Ravenna at the time of Bishop Damianus (*LPRa* 32). This calculation was based on the travel time at about 2.5 knots, similar to the one covered by the Venetian ships in the Middle Ages: Harper 1997, 142–143.

⁶⁸ Harper 1997, 142.

⁶⁹ On the ships: Bonino 1991; Makris 2002, 157; Rautman 2006, 150–156; Kingsley 2009.

⁷⁰ Kapitän 1980, 120: 2775 metric tons per cubic meter. Harper 1997, 144.

⁷¹ Makris 2002, 157. Bonino 1991 considers a load of about 100 tons for Sant'Apollinare Nuovo and 180–250 tons for Sant'Apollinare in Classe.

⁷² Kapitän 1971, 304.

⁷³ Farioli Campanati 1992, 135, with bibliography.

⁷⁴ Farioli 1961, 19–20; Deichmann 1976, 331; Mascanzoni 1993, 402; Harper 1997, 134; Cirelli 2008, 238, n. 170 and 251, n. 254.

that in the 12th century the church of St. John the Baptist which was possibly the original site of the *statio marmorum* of Ravenna,⁷⁵ was also the place where the standardized measurements utilised in trade were kept, and still in the 13th century the presence of a market was mentioned in relation to this building.⁷⁶

The episcopacy of Maximian therefore signals a key moment in the marble commerce in Ravenna. The city had long since appeared to have been engaged in building a series of complementary projects in concert with this trade, which were in turn important for its economic development. These projects included: transportation at sea, the subsequent movement of these goods from the port to their final destination, their completion and preparation for use, and their implementation. Also critical was the commerce surrounding the sarcophagi and the reworking of earlier tombs, as well as the adjustment of wall revetments and floor slabs some of which were later destined to be used in the production of non-vitreous tesserae for mosaics.

The case of Julianus notwithstanding, private commissions, as described in the aforementioned tableau, do not appear to have had a significant impact within the sector of funerary sculpture: for example, no elements have emerged from the *domus* of Ravenna dating to Late Antiquity which clearly reflect the purchase of imported architectural elements by private citizens. This impression can be conditioned only in part by the dispersal of material. For example, in the case of the house on Via d'Azeglio, investigated during the early 1990s, not even fragments of what could have been columns have emerged: the floor and wall panelling is in *sectilia* (Fig. 20), which is generally composed of pieces taken from what were once larger slabs.⁷⁷

The same consideration could conceivably be applied to the Imperial *palatia*, for which there is still only scarce documentation (both archaeological and iconographic) available to provide an adequate evaluation of the decorative apparatus: indeed, the residences of the court in Ravenna are known from historical sources only in relation to the layout of the walls of a few specified locations,⁷⁸ the lone exception being that of the *Theodericianum* near Sant'Apollinare Nuovo, from which only a very few original sculptural elements survive (Fig. 21).⁷⁹

In conclusion, despite still necessitating more precise quantitative calculation, the tableau presented by Ravenna permits a deeper analysis of the problem regarding the modes in which marble and stone material were acquired and utilised, by means of a particularly revealing and significant case study. Imperial authority is almost never expressly cited, yet in reality it is regarded as the principal authority of a complex system involving the management of public monument building, which also included structures which were no longer in use yet were endowed with

⁷⁵ Harper 1997, 134; regarding the *statio marmorum* of Rome see: Maishberger 1997.

⁷⁶ Pini 1993, 535.

⁷⁷ Baldini Lippolis 2004.

⁷⁸ Baldini Lippolis 1996.

⁷⁹ Baldini Lippolis 1992.

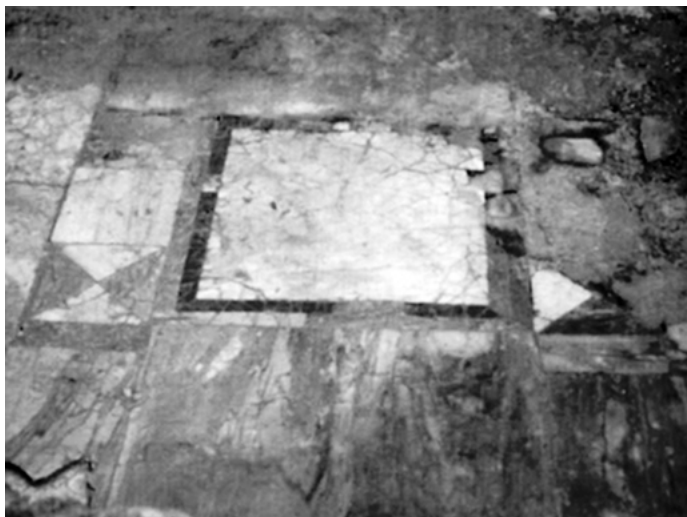


Fig. 20: Floor *sectilia* from the late antique *domus* of via d'Azeglio (photo Baldini).



Fig. 21: National Museum, capital from Theoderic's palace (photo Baldini).

ornatus.⁸⁰ This may at least partially explain the large amount of *spolia* utilised in Ravenna's churches during the Theodosian dynasty (San Lorenzo in Cesarea, San Giovanni Evangelista): the imported elements were limited and contributed tone to the structures, signalling a privileged relationship with the capital, as witnessed in the case of the impost blocks, which were precociously introduced to Ravenna from the East.

By contrast, with regard to the *Apostoleion*, it is the Church of Ravenna which sustained the construction: unable to make direct use of the *spolia*, considering the laws of the day that were in force, it was decided against requesting the reuse of material already available locally. Instead, the entire sculptural apparatus was commissioned from Constantinople, making way for a practice that would later be resumed with regularity after the period of Gothic rule.

Theoderic and his successors appear to have found themselves in an intermediate period, where there was direct access to both the *spolia* and stone obtained from certain territories (the cities cited by Cassiodorus, as well as from Istria). However, there was still acknowledgment of the prestigious role importing material from Constantinople played, a practice which in fact was to be utilised in the palatine church, a significant building from both a religious and political point of view.

Lastly, it is with Maximian that the close relationship with the Eastern court seems to transform according to a representative model which was already consolidated, as the practice of importing Proconnesian material intensified and witnessed bishops become promoters and protagonists, sustained in their building projects by private benefactors (Julianus and Bacauda).

As a consequence, the toilsome voyage of stone and marble comprehends both *spolia* and commissioned works, according to the choices and resources of the patrons, with differing trends seen throughout the changing periods. On the one hand, the government's availability to draw upon earlier monuments emerges in Ravenna and other pertinent locations, as particularly evidenced by documentation from the Theoderician age. On the other, there exists the willingness on the part of the Church of Ravenna to exhibit an adherence to models in Constantinople by means of impressive commissions of architectural material, which, along with other decorative elements, were intended to qualify the importance of the constructions and the capacity expressed by this same episcopacy.

⁸⁰ Janvier 1969; Baldini 2007.

Bibliography

Primary Sources

- Annales regni Francorum inde ab a. 741 usque ad a. 829, qui dicuntur Annales Laurissenses maiores et Einhardi*, recensuit F. Kunze, Hannoverae 1895 (Scriptores rerum Germanicarum in usum scholarum ex Monumentis Germaniae Historicis separatim editi, 6).
Excepta Valesiana, recensuit J. Moreau, editionem correctiorem curavit V. Velkov, Lipsiae 1968.

Secondary Sources

- Anguissola, Anna. 2002. "Note alla legislazione su spoglio e reimpiego di materiali da costruzione ed arredi architettonici, I sec. a.C. – VI sec. d.C." In *Senso delle rovine e riuso dell'antico*, edited by Walter Cupperi, 13–29. Pisa 2002.
- Asgari, Nursin. 1995. "The Proconnesian Production of Architectural Elements in Late Antiquity, based on Evidence from the Marble Quarries." In *Constantinople and its Hinterland* (Papers from the Twenty-seventh Spring Symposium of Byzantine Studies) edited by Cyril Mango and Gilbert Dagron, 263–288. Aldershot.
- Bakirtzis, Charalambos. 2000. "Un miracle de Saint Démétrius de Thessalonique au Maghreb", *L'Africa Romana*, XIII, 1449–1454. Roma.
- Baldini, Isabella. 2000. "La basilica di Mitropolis: problemi di scultura architettonica", in *Creta romana e protobizantina*, edited by M. Livadiotti, I. Symiakaki, 1133–1145. Padova.
- Baldini, Isabella. 2007. "Private space in late antique cities: laws and building procedures." In *Housing in late antiquity: from Palaces to Shop*, edited by Luke Lavan, Lale Ozgenel and Alexander Sarantis, 197–237. Leiden-Boston.
- Baldini Isabella et al. Forthcoming. "Ricerche sui materiali marmorei e lapidei di età tardoantica a Ravenna. In *Economia e territorio nell'Adriatico centrale tra tarda Antichità e alto Medioevo (IV-VIII secolo)*, edited by Enrico Cirelli, Enrico Giorgi and Giuseppe Lepore.
- Baldini Lippolis, Isabella. 1992. "Un capitello tardoantico figurato dal Palazzo di Teoderico a Ravenna." *Felix Ravenna*, 141–144: 129–144.
- Baldini Lippolis, Isabella. 1996. "Articolazione e decorazione del palazzo imperiale di Ravenna." *CARB XLIII*: 1–31
- Baldini Lippolis, Isabella. 1997–2000. "Sepulture privilegiate nell'Apostoleion di Ravenna." *Felix Ravenna* 153–156: 15–79.
- Baldini Lippolis, Isabella. 2003. "S. Lorenzo in Cesarea e il problema di lettura iconografica del sarcofago Pignatta", in *Atti del VII Congresso Nazionale di Archeologia Cristiana* (Cassino, 20/24 settembre 1993), 225–240. Cassino.
- Baldini Lippolis, Isabella. 2004. "La chiesa di S. Eufemia ad Arietem; Il culto di S. Eufemia a Ravenna; Periodo bizantino, Gli ambienti." In *Archeologia urbana a Ravenna. La "Domus dei Tappeti di Pietra". Il complesso archeologico di via D'Azeglio*, edited by Giovanna Montevocchi, 71–79. Ravenna.
- Barbin, Vincent and Hermann, John J. 1993. "The exportation of marble from the Aliki quarries on Thasos. Cathodoluminescence of samples from Turkey and Italy." *American Journal of Archaeology* 97: 91–103.
- Barsanti, Claudia. 1989. "L'esportazione di marmi dal Proconneso nelle regioni pontiche durante il IV-VI secolo." *Rivista dell'Istituto Nazionale di Archeologia e Storia dell'Arte* 12: 91–220.

- Barsanti, Claudia. 2002. "Capitelli di manifattura costantinopolitana a Roma." In *Ecclesiae Urbis*, edited by Federico Guidobaldi and Alessandra Guiglia Guidobaldi, 1443–1478. Città del Vaticano.
- Beykan, Müren. 2012. *Ionische Kapitelle auf Prokonnesos: Produktion und Export römischer Bauteile*. Tübingen.
- Bohne, Anke. 1998. "Das Kirchenwrack von Marzamemi. Handel mit Architekturteilen in frühbyzantinischer Zeit." *Skyllis* 1.1: 6–17.
- Bonino, Marco. 1991. "Archeologia navale", *Storia di Ravenna*, II/1, *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 27–53. Venezia.
- Bovini, Giuseppe. 1953. "Qualche appunto sull'antica Cattedrale di Ravenna." *Felix Ravenna* 10: 59–84.
- Bovini, Giuseppe. 1964. *La "Basilica apostolorum", attuale chiesa di S. Francesco di Ravenna*. Ravenna.
- Buonamici, Gianfrancesco. 1748. *Metropolitana di Ravenna*. Bologna.
- Bühl, Gudrun. 1995. "Der sogenannte Liberius-Sarkophag in San Francesco zu Ravenna: echt oder unecht?" *CARB* 41: 77–108.
- Campione Ada. 2004. "Lorenzo di Siponto. Un vescovo del VI secolo tra agiografia e storia." *Vetera Christianorum* 41: 61–82.
- Castagnino Berlinghieri, Elena F. and Paribeni, Andrea. 2011. "Byzantine Merchant Ships and Marble Trade. New Data from the Central Mediterranean. In Memory of Gerhard Kapitän (1920–2011)." *Skyllis* 11.1: 64–75.
- Castagnino Berlinghieri, Elena F. and Guzzardi, Lorenzo. 2014. "Nuovi" elementi architettonici della "basilica" a bordo della *navis lapidaria* di Marzamemi." In *Atti del III Convegno di Archeologia Subacquea*, edited by Giuliano Volpe, Maria Turchiano and Danilo Leone, 49–56. Bari.
- Castagnino Berlinghieri, Elena F. and Paribeni, Andrea. 2015. "Marble production and marble trade along the Mediterranean coast in Early Byzantine Age (5th–6th centuries): data from quarries, shipwrecks and monuments." *SOMA 2011. Proceedings of the 15th Symposium on Mediterranean Archaeology*, edited by Pietro Maria Militello, Hakan Öniz, II: 1033–1041. Oxford.
- Cirelli, Enrico. 2008. *Ravenna: archeologia di una città*. Firenze.
- Cosentino, Salvatore. 2006. "Le fortune di un banchiere tardoantico. Giuliano argentario e l'economia di Ravenna nel VI secolo", in *Santi banchieri re. Ravenna e Classe nel secolo VI*, edited by Andrea Augenti and Carlo Bertelli, 43–48. Milano.
- Cosentino, Salvatore 2014a. "Banking in early Byzantine Italy." *Cahiers de recherches médiévales et humanistes* 28: 243–254.
- Cosentino, Salvatore. 2014b. "Constans II, Ravenna's Autocephaly and the Panel of the Privileges in St. Apollinare in Classe: A Reappraisal", Aureus. *Volume dedicated to Professor Evangelos K. Chrysos*, edited by Taxiarchis G. Kolia, † Konstantinos P. Pitsakis, with the collaboration of Catherine Synellis, 153–169. Athens.
- Deichmann, Friedrich W. 1969. *Ravenna, Hauptstadt des spätantiken Abendlandes, 1. Ravenna, Geschichte und Monumente*. Wiesbaden.
- Deichmann, Friedrich W. 1974. *Ravenna, Hauptstadt des spätantiken Abenlandes, Kommentar, 1*. Wiesbaden.
- Deichmann, Friedrich W. 1976. *Ravenna, Hauptstadt des spätantiken Abenlandes, Kommentar, 2*. Wiesbaden.
- Deichmann, Friedrich W. 1981. *Corpus der Kapitelle der Kirche von San Marco zu Venedig*. Wiesbaden.

- Deichmann, Friedrich W. 1989. *Ravenna, Hauptstadt des spätantiken Abendlandes*, Band II, Kommentar, 3. Teil, Geschichte, Topographie, Kunst und Kultur, Stuttgart.
- De Maria, Sandro. 2000. "Cultura figurativa: la decorazione architettonica." In Aemilia. *La cultura romana in Emilia Romagna dal III sec. a.C. all'età costantiniana*, edited by Mirella Marini Calvani, 288–299. Venezia.
- Farioli, Raffella. 1961. "Ravenna paleocristiana scomparsa." *Felix Ravenna* 83: 5–88.
- Farioli Campanati, Raffaella. 1991. "La scultura architettonica e di arredo liturgico alla fine della tarda antichità: i rapporti con Costantinopoli. In *Storia di Ravenna*, II/1. *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 249–267. Venezia.
- Farioli Campanati, Raffaella. 1992. "Ravenna, Costantinopoli: aspetti topografico-monumentali e iconografici." In *Storia di Ravenna* II/2. *Dall'età bizantina all'età ottoniana*, edited by Antonio Carile, 127–158. Venezia.
- Farioli Campanati, Raffaella. 2005. "Ravenna e i suoi rapporti con Costantinopoli: la scultura (secoli V.-VI)." In *Venezia e Bisanzio. Aspetti della cultura artistica bizantina da Ravenna a Venezia (V-XIV secolo)*, edited by Clementina Rizzardi, 13–43. Venezia.
- Geary, Patrick J. 1990. *Furta sacra: la trafugazione delle reliquie nel Medioevo (secoli IX-XI)*. Trad. it. Milano.
- Günsenin, Nergis. 2002. "Medieval Trade in the Sea of Marmara: the Evidence of Shipwrecks." In *Travels in the Byzantine World*, edited by Ruth Macrides, 125–135. Aldershot.
- Harper, James G. 1997. "The Provisioning of Marble for the Sixth-Century Churches of Ravenna: A Reconstructive Analysis." In *Pratum Romanum. Richard Krautheimer zum 100. Geburtstag*, edited by Renate L. Colella, Meredith J. Gill, Laurence A. Jenkins, Petra Lamers, 131–148. Wiesbaden.
- Herrmann, John J., Barbin, Vincent and Mentzos, Aristotle. 1999. "The exportation of marble from Thasos in Late Antiquity. The quarries of Alikí and cape Fanatí." In *Thasos: Matières premières et technologie de la préhistoire à nos jours*, edited by Caïdo Koukouli-Chrysanthaki, Arthur Muller and Stratis Papadopoulos, 75–90. Paris.
- Iașcu, Ioan. 2013. "The ambos of the Christian basilicas within the province of Scythia." *Studia Antiqua et Archaeologica* 19: 49–78.
- Jakobs, Peter H.F. 1987. *Die frühchristlichen Ambone Griechenlands*. Bonn.
- Janvier, Yves. 1969. *La législation du bas-empire romain sur les édifices publics*. Aix en Provence.
- Hasluck, Frederick W. and Jewell, Harry H. 1920. *The Church of Our Lady of the Hundred Gates (Panagia Hekatonapyliani) in Paros*. London.
- Kapitän Gerhard. 1969. "The Church Wreck of Marzamemi." *Archaeology* 22, 2: 122–133.
- Kapitän, Gerhard. 1971. "Esplorazioni su alcuni carichi di marmo e pezzi architettonici davanti alle coste della Sicilia Orientale", in *Atti del III Convegno internazionale di Archeologia Sottomarina*, 296–309. Bordighera.
- Kapitän, Gerhard. 1980. "Elementi architettonici per una basilica dal relitto navale del VI secolo di Marzamemi (Siracusa)", *CARB* 27: 71–136.
- Kautzsch, Rudolf. 1936. *Kapitellstudien: Beiträge zu einer Geschichte des spätantiken Kapitells im Osten vom vierten bis ins siebente Jahrhundert*. Berlin.
- Kennel, Stefanie A.H. 1994. "Hercules. Invisible Basilica (Cassiodorus, *Variae* I, 6)". *Latomus* 53: 159–175.
- Kingsley, Sean A. 2004. *Shipwreck archaeology of the Holy Land: processes and parameters*. London.
- Kingsley, Sean A. 2009. "Great voyages, great Ocean-going ships?" In *Byzantine Trade, 4th-12th Centuries: The Archaeology of Local, Regional and International Exchange*, edited by Marlia Mundell Mango, 323–328. Oxford.

- Kozelj, Tony and Wurch-Kozelj, Manuela 1993. "Les transports dans l'Antiquité." In *Archeologia delle attività estrattive e metallurgiche, V Ciclo di Lezioni sulla Ricerca Applicata in Archeologia*, edited by Riccardo Francovich, 97–142. Firenze.
- Kozelj, Tony and Wurch-Kozelj, Manuela. 1999. "Les traces d'extraction à Thasos de l'antiquité à nos jours." In *Thasos: Matières premières et technologie de la préhistoire à nos jours*, edited by Caïdo Koukouli-Chrysanthaki, Arthur Muller and Stratis Papadopoulos, 49–53. Paris.
- Lemerle, Paul. 1979. *Les plus anciens recueils des miracles de saint Démétrius et la pénétration des Slaves dans les Balkans*, I. Le texte. Paris.
- Lemerle, Paul. 1981. *Les plus anciens recueils des miracles de Saint Démétrius et la pénétration des Slaves dans les Balkans*, II. Commentaire. Paris.
- Magoulias, Harry. 1976. "Trades and Crafts in the Sixth and Seventh Centuries as Viewed in the Lives of the Saints." *Byzantinoslavica* 37: 11–35.
- Maischberger, Martin. 1997. *Marmor in Rom*. Wiesbaden.
- Makris, George. 2002. "Ships." In *The Economic History of Byzantium: From the Seventh through the Fifteenth Century*, edited by Angeliki E. Laiou, 91–100. Washington 2002.
- Marano, Yuri A. 2008. "Il commercio del marmo nell'Adriatico tardoantico (IV-VI secolo)." In *Eredità culturali dell'Adriatico. Archeologia, storia, lingua e letteratura*, edited by Silvana Collodo and Giovanni Luigi Fontana, 159–174. Roma.
- Marsili, Giulia. 2019. *Archeologia del cantiere protobizantino. Cave, maestranze e committenti attraverso i marchi dei marmorari* (DISCI. Dipartimento Storia Culture Civiltà. Archeologia, 24). Bologna.
- Marsili, Giulia. 2015. "Sigle di lavorazione e atelier marmorari: nuove riflessioni sul relitto di Marzamemi." In *Isole e terraferma nel primo cristianesimo. Identità locale ed interscambi culturali, religiosi e produttivi*, edited by Rossana Martorelli, Antonio Piras and Pier Giorgio Spanu, 369–376. Cagliari.
- Mascanzoni, Leardo. 1993. "Edilizia e urbanistica dopo il Mille: alcune linee di sviluppo." In *Storia di Ravenna III. Dal Mille alla fine della signoria polentana*, edited by Antonio Vasina, 395–445. Venezia.
- Mazzotti, Mario. 1954. *La basilica di Sant'Apollinare in Classe*. Città del Vaticano.
- Mazzotti, Mario. 1986. "S. Apollinare in Classe: indagine e studi degli ultimi trent'anni." *Rivista di Archeologia Cristiana* 62: 189–219.
- Mauskopf Deliyannis, Deborah. 2010. *Ravenna in Late Antiquity*. Cambridge.
- Minguzzi, Simonetta. 1992. "Elementi di scultura tardoantica a Venezia: gli amboni di San Marco." *Felix Ravenna* 141–144: 7–94.
- Naumann, Rudolf and Belting, Hans. 1966. *Die Euphemia Kirche am Hippodrom zu Istanbul und ihre Fresken*. Berlin 1966.
- Novara, Paola. 1997. *La cattedrale di Ravenna: storia e archeologia*. Ravenna 1997.
- Novara, Paola. 2011. "I capitelli a due zone." In *Le collezioni del Museo arcivescovile di Ravenna*, edited by Giovanni Gardini and Paola Novara, 99–100. Ravenna.
- Novara, Paola. 2016. "Ravenna. S. Pietro Maggiore (San Francesco). Gli scavi inediti e poco noti degli anni '20 e '70 del Novecento." In *Atti del VII Congresso nazionale di archeologia medievale*, edited by Paul Arthur and Marco Leo Imperiale, II, 148–152. Firenze.
- Paribeni, Andrea. 2013. "Modalità e prassi operative delle maestranze del Proconneso nei cantieri bizantini tra V e VI secolo." In *Episcopus, Civitas Territorium, Atti del XV Congresso Internazionale di Archeologia Cristiana*, edited by Olof Brandt, Silvia Cresci, Jorge Lòpez Quiroga and Carmelo Pappalardo, III, 1471–1480. Città del Vaticano.
- Paribeni, Andrea and Castagnino Berlinghieri, Elena F. 2015. "Produzione e commercio del marmo lungo le rotte del Mediterraneo: evidenze dai depositi e dai relitti navali delle coste italiane." In *Isole e terraferma nel primo cristianesimo: identità locale ed interscambi culturali, religiosi*

- e *produttivi*, I, edited by Rossana Martorelli, Antonio Piras and Pier Giorgio Spanu, 395–402. Cagliari.
- Pavan, Gino. 1978. "Restauro e ritrovamenti della Basilica di S. Apollinare in Classe." *CARB* 25: 233–264.
- Penni Iacco, Emanuela. 2006. *La basilica di S. Apollinare Nuovo attraverso i secoli*. Bologna.
- Pensabene, Patrizio. 2002. "Inscribed architectural elements from the Prokonnesos in Durazzo, Tartous, Cilician Aphrodisias and Caesarea." In *ASMOSIA 5, Interdisciplinary studies on ancient stone*, edited by John J Hermann Jr., Norman Herz and Richard Newman, 328–334. London.
- Pensabene, Patrizio. 2004. "La diffusione del marmo lunense nelle province occidentali." In *La decoración arquitectónica en las ciudades romanas de occidente*, edited by Sebastián F. Ramallo Asensio, 421–466. Murcia.
- Pensabene, Patrizio. 2015. "Marmi pubblici e marmi privati. Note in margine ad un recente volume di Ben Russell." *Archeologia Classica* 66: 575–593.
- Pini, Antonio I. 1993. "L'economia "anomala" di Ravenna in un'età doppiamente di transizione (secc. XI–XIV)." In *Storia di Ravenna*, III. *Dal mille alla fine della signoria Polentana*, edited by Augusto Vasina, 509–554. Ravenna.
- Porta, Paola. 2007. "San Michele in Africisco a Ravenna: la scultura architettonico-decorativa." In *La diaspora dell'arcangelo: San Michele in Africisco e l'età giustiniana*, edited by Claudio Spadoni and Linda Kniffitz, 193–203. Cinisello Balsamo.
- Pralong, Annie. 1993. "Remarques sur les chapiteaux corinthiens tardifs en marbre de Proconnèse." In *L'acanthé dans la sculpture monumentale de l'antiquité à la Renaissance*, 133–146. Paris.
- Pralong 2000 A., "La typologie des chapiteaux corinthiens tardifs en marbre de Proconnèse et la production d'Alexandrie." *Revue Archéologique* 2000: 81–101.
- Pulak, Cemal, Ingram, Rebecca and Jones Michael L. 2014. "The Shipwrecks of Yenikapı and Their Contribution to the Study of Ship Construction." In *Stories from the Hidden Harbor: Shipwrecks of Yenikapı*, edited by Zeynep Kızıltan and Gülbahar Baran Çelik, 22–34. Istanbul.
- Rautman, Marcus L. 2006. *Daily Life in the Byzantine Empire*. Westport/London.
- Ricci, Corrado. 1935. *Monumenti: tavole storiche dei mosaici di Ravenna. Sant'Apollinare in Classe*. Roma 1935.
- Rizzardi, Clementina. 2011. *Il mosaico a Ravenna. Ideologia e arte*. Bologna.
- Russell, Ben. 2012. "Shipwrecks and stone cargoes: some observations." In *Asmosia 9, Interdisciplinary Studies on Ancient Stone*, edited by Anna Gutiérrez García, Pilar Lapuente and Isabel Rodà, 533–539. Tarragona.
- Russell, Ben. 2013a. "Roman and Late Antique shipwrecks with stone cargoes: a new inventory." *Journal of Roman Archaeology* 26: 331–361.
- Russell, Ben. 2013b. *The economics of the Roman stone trade*. Oxford 2013.
- Russo, Eugenio. 1991. *Sculture del complesso eufrasiano di Parenzo*. Napoli 1991.
- Russo, Eugenio. 2010a. "Il rilievo costantinopolitano con Eracle e il cervo nel Museo Nazionale di Ravenna." *Ravenna studi e ricerche* 17: 15–26.
- Russo, Eugenio. 2010b. "La circolazione degli artefici e del marmo nel VI secolo." *Bizantinistica* 12: 31–55.
- Sodini, Jean Pierre. 1989. "Le commerce des marbres à l'époque protobyzantine." In *Hommes et richesses dans l'Empire byzantin, IVe–VIIe siècle*, edited by Vassiliki Kravari, Jaques Lefort and Cécile Morrisson, 163–186. Paris.
- Sodini, Jean-Pierre, Barsanti, Claudia and Guiglia Guidobaldi, Alessandra. 1998. "La sculpture architecturale en marbre au VIe siècle à Constantinople et dans les régions sous influence constantinopolitaine." In *Acta XIII Congressus Internationalis Archaeologiae Christianae*, 301–376. Città del Vaticano/Split.

- Sodini, Jean-Pierre, Kolokotsas, Konstantinos. 1984. *Aliko II. La basilique double*. Athènes 1984.
- Sodini, Jean-Pierre, Lambraki, Anna and Koželj, Tony. 1980. *Aliko I. Les carrières de marbre à l'époque paléochrétienne*. Athènes 1980.
- Verhoeven, Mariette. 2011. *The Early Christian Monuments of Ravenna. Transformations and Memory*. Turnhout 2011.
- Vernia, Barbara. 2005. "L'arredo liturgico della basilica di sant'Apollinare Nuovo a Ravenna." In *Venezia e Bisanzio. Aspetti della cultura artistica bizantina da Ravenna a Venezia (V-XIV secolo)*, edited by Clementina Rizzardi, 363–389. Venezia.
- Volpe, Giuliano. 2007. "Architecture and Church Power in Late Antiquity: Canosa and San Giusto (Apulia)." In *Housing in late antiquity: from Palaces to Shop*, edited by Luke Lavan, Lale Özgenel and Alexander Sarantis, 131–168. Leiden-Boston.
- Volpe, Giuliano. 2009. "L'iniziativa vescovile nella trasformazione dei paesaggi urbani e rurali in Apulia: i casi di Canusium e di San Giusto." In *Ideologia e cultura artistica tra Adriatico e Mediterraneo orientale (IV-X secolo)*, edited by Raffaella Farioli Campanati, Clementina Rizzardi, Paola Porta and Isabella Baldini Lippolis, 365–376. Bologna 2009.
- Wurch, Tony and Kozelj, Manuela. 1992 "The military protection of the quarries of the Aliko area during the Byzantine period." In *Ancient stones. Quarrying, trade and provenance, Interdisciplinary studies on stones and stone technology in Europe and Near East from the prehistoric to the Early Christian period*, edited by Marc Waelkens, Norman Herz and Luc Moens, 43–57. Leuven.
- Zanotto, Rita. 2007. *Vetusta servare. I reimpieghi di scultura architettonico-decorativa a Ravenna e nel ravennate tra tarda antichità e alto medioevo*. Ravenna.
- Zollt, Thomas. 1994. *Kapitellplastik Konstantinopels vom 4. bis 6. Jahrhundert n. Ch.: mit einem Beitrag zur Untersuchung des ionischen Kampferkapitells*. Bonn.

Maria Cristina Carile

5 Ivory Production: Commerce, Culture and Power

Abstract: Since the 19th century scholars have claimed the existence of a school of ivory craftsmanship in late antique Ravenna. Following such theories, with the settlement of the western court in Ravenna in 402 a school of ivory carving produced plaques and *pyxides* that were exported outside the western capital. Later, in the 6th century, artists with different provenance came to Ravenna and there created consular and religious diptychs. Scholars' arguments were based upon iconographic and stylistic analyses, aimed at discovering the chronology and places of origin for a number of late antique ivories. Yet there is no evidence for the existence of an ivory atelier in Ravenna based on the lack of archaeological and textual support.

This paper attempts to demonstrate that Ravenna could plausibly have been a location for production of ivory objects for its centrality in the politics and commercial routes of the late antique Mediterranean. Furthermore, by analyzing the imagery of some late antique ivory carvings in relation to the visual culture of late antique Ravenna, this contribution will put forward a few hypotheses about specific ivory artifacts that may have had a major role as expressions of the culture and religion of the people leaving in late antique Ravenna.

It was at the end of the 19th century that Georg Stuhlfauth first postulated the existence of a school of ivory craftsmanship in late antique Ravenna.¹ Almost a century later, Wolfgang Fritz Volbach developed the argument further. According to Volbach, after 402 the settlement of the western court in Ravenna would have resulted in the creation of a school of ivory carving producing plaques and *pyxides*. Later, in the 6th century, increasing ties with Constantinople brought the arrival of artists with different provenance, who may have created consular and religious diptychs and even Maximian's chair.²

Stuhlfauth's, Volbach's, and other scholars' arguments were based upon iconographic and stylistic analyses, aimed at discovering the chronology and places of origin for a number of late antique ivories.³ Friedrich Wilhelm Deichmann applied analogous methodology and attempted to answer the same questions, yet he emphasized that there is no evidence for the existence of an ivory atelier in Ravenna

¹ Stuhlfauth 1896, 84–112. Earlier, Jules Labarte had suggested such a possibility in relation to Maximian's chair (Labarte 1864–66, I. 17).

² Volbach 1977.

³ See also: Wessel 1952–53, 63–90 and 1953–54, 1–30.

based on the lack of archaeological and textual support.⁴ Indeed, until the pioneering work of Anthony Cutler gave rise to a new age of research on late antique ivory carving,⁵ style and iconography were the primary tools for art historical analysis as applied to ivory carving.⁶ In recent years, a deeper knowledge of carving techniques and materials, combined with new historical and archaeological data regarding trades and exchanges in the late antique Mediterranean, has allowed scholars to situate with certainty the presence of ateliers of ivory carving in certain areas at specific times in the history.⁷ However, such evidence for Ravenna is still scant and the potential of the late antique city as a center of ivory manufacture and for luxury objects, in general, is therefore greatly underestimated in modern scholarship.⁸

In this paper, I will first attempt to demonstrate that the city could plausibly have been a location for production of ivory objects. The centrality of Ravenna in the politics and commercial routes of the late antique Mediterranean, its wealthy social environment, and its rich cultural milieu all point to an élite clientele with a great appreciation for luxury goods, among which certainly were ivory products. Instead of trying to locate these objects by virtue of their style and technique, by analyzing their imagery in relation to the visual culture of late antique Ravenna, I will put forward a few hypotheses about specific ivory objects that are connected to fifth- and sixth-century Ravenna and show how it is possible that they were produced there. Using the most recent developments in research about late antique ivory carving, I will show that certain artifacts that are now part of museum collections may have had a major role as expressions of the culture and religion of the people leaving in this late antique city.

The question of ivory production in Ravenna is affected by the same difficulties as any study involving the production of objects within that city: that is, finding evidence for the presence of material resources and the local skilled craftsmen necessary to their manufacture. For, although material evidence attests for many kinds of imported materials and objects into Ravenna from antiquity on, until recently, there has been no archaeological evidence to suggest local manufacture for any of these.⁹ For instance, the

⁴ Deichmann 1989, 347–348.

⁵ Among his ample bibliography, see especially: Cutler 1998. For an overview of the *status quaestionis* until 1983: Cutler 1987, 431–471.

⁶ For discussion on art historical analysis: Cieri Via 1998.

⁷ For instance, Alexandria has been convincingly shown to be a center of production of *pyxides* and other objects in Late Antiquity (Bühl 2008, 9–16; Rodziewicz 2009, 83–96). For the ateliers of Rome until the 5th century: St. Clair 2003.

⁸ Apart from Carlo Bertelli's hypothesis that Ravenna produced the so-called Ariadne ivories during the Ostrogothic regency (Bertelli 1992, 177–188), and a few other mentions of Ravenna as a possible center of ivory production (for instance, Peschlow 2011, 75–89, especially 76), the only attempt to locate firmly a manufacture in Ravenna is: Frantová 2014.

⁹ The present book will certainly change this picture and, recently, the excavations at the harbor of Classe have brought to light new evidence proving the existence of a late antique manufacture of glass, metal, and bone objects (Augenti 2013, 219–236).

importation of stones, sculptural architectural elements, like capitals and columns, from across the Mediterranean was accepted by virtue of the evidence shown in Ravenna's church buildings and architecture. However, scholars dismissed the idea that artisans or architects traveled and worked in different areas of the empire, assuming that sculptures were imported already finished.¹⁰ Recent research has disproven this point of view, showing that sculptors and other craftsmen from the capital or the marble ateliers in the Marmara Sea came with the marbles to finish these architectural elements *in situ*, and at Ravenna, worked together with local artisans.¹¹

A study of ivory production in Ravenna is particularly difficult due to the fact that ivory objects are small in size and thus easily portable, suggesting that such objects were easily imported; and just as easily exported, given or carried away, if local ivory carvers did indeed work there. Until recently, any attribution of artefacts to Ravenna has been based on style, the importance of which has been heavily debated in more recent scholarship on ivory production. Style is not always useful, as it turns out. For example, the similarities in iconography and general composition of several surviving five-part ivory diptychs of religious content, each centering on the image of the enthroned Christ and Virgin, indicate that, despite *major* differences in style, they all originated in Constantinople in the middle of the 6th century, although they were probably made by different craftsmen.¹² The reverse is also true, as iconography cannot always determine place of origin. Scholars turn once again to elements of style, as in the confirmed common origin (and probably workshop) of several consular ivories that show differences in iconographical details, though the style is maintained throughout. For instance, the five famous ivories produced for the consulate of Anastasius in 517 show substantial variations in the dress of the emperor and the consular scepter,¹³ but were clearly all carved in the same style. However, the consular ivories of Areobindus (consul in 506) were produced in at least three versions, with totally different decorative schemes, iconography, and style.¹⁴ Such instances diminish the importance of any argument based entirely on stylistic analysis from the discussion of late antique ivory carving, and

¹⁰ This is the mainstream theory throughout Deichmann's work: Deichmann 1969–1989.

¹¹ For Ravenna architecture: Russo 2003. For architectural sculptures and their craftsmen in Ravenna and Poreč: Russo 1991.

¹² Caillet 2008, 17–29. This view is now generally accepted: Spieser 2015, 404.

¹³ For the Anastasius diptychs Delbrueck, 1929, n. 18–21; Volbach 1976, n. 17–21. For these ivories and their differences: Olovsdotter 2005, pp. 47–55; Olovsdotter 2012, 33–47.

¹⁴ The three versions are exemplified in two exemplars now in Paris and another one in Lucca: one type shows the portrait of the consul in a central roundel (Paris, Musée du Louvre, inv. n. OA9525), another one is covered with an elaborate image of the consul attending at the circus games while seated on his *sella curulis* (Paris, Musée du Moyen Age, inv. no Cl. 13135), while the third type pertains to the so-called ornamental type of consular diptychs (Lucca, Complesso Museale e Archeologico della Cattedrale). For discussion: Delbrueck 1929, n. 9–15; Volbach 1976, n. 8–14; Olovsdotter 2005, 38–44.

confirm the presence of different craftsmen with different skills, each with his own way of carving within the same cultural milieu, likely working together within the premises of an atelier.¹⁵ The organization of the production of ivory in ateliers grouping together artisans of different origins and skills is now generally accepted by scholars of Late Antiquity.¹⁶ If such ateliers existed in late antique Ravenna is, however, still not proven.

According to a major scholarly theory, the production of luxury goods such as silverware, textiles, and ivories was linked to the presence of the court in the capital at a given time. In fact, the manufacture of these objects by the *palatini artifices* was under the control of the *comes sacrarum largitionum*, a member of the court with an important function within the imperial administration.¹⁷ This has proven true for imperial Rome as well as for Constantinople during Late Antiquity and the Middle Ages.¹⁸ According to this theory, Milan was a major center of production of silver and ivory objects from 286 until 402, when the western court resided in this capital.¹⁹ Gemma Sena Chiesa claims that Milan remained an active center of ivory carving even later, until the middle of the 5th century, long after the court had transferred in Ravenna (around 402). At that time another major fifth-century ivory atelier was apparently located in Gallia, probably in Trier.²⁰ Scholars of Ravenna agree that the settlement of the court in Ravenna would have brought about the transfer of craftsmanship for luxury goods such as jewelry and textiles to the city.²¹ However, no archaeological evidence has allowed scholars to prove this assumption.²² Presumably, then, ivories would have been included, as well. Again, nothing yet has been discovered to prove it. By contrast, archeological evidence shows that manufacture of ivory may have been

¹⁵ The differences between analogous objects are seen as “variations” by craftsmen working on the same model: Caillet 1986, 7–15; see also: Cutler 1993, 167–192.

¹⁶ Cutler 1994, 66–78; Cutler 2007, 131–161, especially 140–142; St. Clair 2003, 32–37.

¹⁷ The scholarly opinion that the *palatini artifices* were responsible also of ivory manufacture is based on a law issued by Emperor Leo (457–474) and recorded in Justinian’s law code that, however, does not mention ivory products: *CJ* XI, 12. In this respect, more important is perhaps another law issued by Constantine in 337 and concerning exemptions: it mentions the *eborarii* among the *artifices artium* benefitting from tax exemptions (*CJ* X, 66). For the *comes sacrarum largitionum*: Delmaire 1989, 38–91. Delmaire underlines that after 534 *sculptores* and *artifices* were qualified artisans working on a wide range of materials, including ivory (Delmaire 1989, 158).

¹⁸ For ivory production in Rome until the 5th century: St. Clair 2003. For silverware in Constantinople and generally in Byzantium: Boyd/Mundell Mango 1992. For ivory production in Byzantium: Cutler 1994.

¹⁹ Wessel 1948–49, 119–160; Volbach 1977, 7–9; Brandeburg 1987, 80–129; Sena Chiesa 1990, 335–338.

²⁰ Sena Chiesa 1990, 338.

²¹ Maioli 1991, 223–247, especially 244–245. For jewelry production: Baldini Lippolis 1999, 240–241; and most recently: Aimone 2011a; Aimone 2011b. For book production (attested at least from the time of the Gothic rule): Cavallo 1992, 79–125; Degni 2006, 168–179. With special attention to the 6th century: Farioli Campanati 1988, 23–51.

²² Maioli 1991, 244–245; most recently, the discussion in: Mauskopf Deliyannis 2010, 218 and 321 n. 40.

present in other cities. For instance, a fourth-century atelier of ivory carving has been hypothesized for the area of the *capitolium* at *Brixia* (Brescia) based on archaeological finds, an important city, though unlike Ravenna, never a capital in Late Antiquity.²³ Thus, since such an important imperial seat as Ravenna almost invariably would have had luxury workshops at hand, and because evidence for ivory production, although very little, has been found in less important cities like Brescia, it is quite possible that ivory was carved in Ravenna.

Moreover, the most recent archaeological research in Ravenna and its surroundings has provided new evidence that, if not directly proof of ivory production there, may add contours to the local manufacture of decorative, small-scale carving. The excavations at the harbor of Classe have brought to light several bone finds, allowing scholars to hypothesize the presence of artisans carving in bone between the 5th and the 7th century.²⁴ Since the same techniques and tools were applied to bone as well as ivory carving,²⁵ the existence of an ivory production may now be at least posited on stronger grounds. Unfortunately, no systematic study of these finds has been published yet. The bone objects known from the supposed atelier of Classe are plaques with geometric decoration or simple combs,²⁶ the latter found buried as grave goods in women's and infants' tombs.²⁷ Indeed, this evidence is limited: although it does support the possibility of a larger production with bone carving at the lower end of the spectrum of a wider industry, it is too simple and scarce to point to the manufacture of high quality ivory carving in Ravenna.

What new archaeological research has brought to light, however, is an intense commercial network, which brought to Ravenna goods from the major areas of tusk distribution in the Mediterranean. The finds from the harbor at Classe demonstrate the vigorous importation of olive oil and wine from the eastern Mediterranean and of grain, *garum*, and red slipware from Northern Africa; but also included in the finds are a small number of amphorae from Egypt and Nubia that are rarely attested

23 Sena Chiesa 1990, 338. For the area of Brescia as an important commercial center, where luxury goods were both imported and produced especially in the 6th and 7th century: De Marchi 2006, 37–82, especially 60–81. Importantly, scholars tend to agree that in small centers, what is more indicative of the wide distribution of ivory goods than the presence of local workshops – the evidence for which is particularly scant – was the city's place within the commercial routes that connected the various areas of the Mediterranean (Melucco Vaccaro 1993, 1–19; St. Clair 2003, 37).

24 Augenti 2005, 239–240; Augenti 2013, 227.

25 Cutler 1985, 20–26, 36; see also Cutler 1993, 172–173. Most recently, with extensive comparison between bone and ivory carving: Olch Stern/Hadjilazaro Thiemme 2007, 13–30. For tools and techniques: Von Barga 1994, 45–63; Bianchi 2007, 349–386.

26 Among these objects there was also a horn used as a knife's hilt: Augenti/Bertelli 2007, 123, 124 (cat. n. IV.3, IV.4).

27 Ferreri 2009, 459–564, especially 459–460; Ferreri 2011, 59–74, especially 68–70. See also Ferreri's contribution in the present volume. As from personal communication with the author, such grave goods are local productions.

elsewhere in the Adriatic (Fig. 1).²⁸ This latter evidence is particularly important as the tusk used for the vast majority of late antique ivories is of African origin.²⁹ The tusk was imported from Northern Africa where elephants survived until the 6th century, or from Nubia, Ethiopia and Eastern Africa through the commercial routes that reached the Mediterranean from the Red Sea via the Nile.³⁰ Thus, since the archaeological evidence attests to a lively trade between Ravenna and Africa in the 5th and 6th century, raw tusks, semi-finished or even finished ivory products may well have been shipped to Ravenna and, from there, could have reached Northern Italy and Europe through river and canal routes. In other words, although the actual state of research cannot

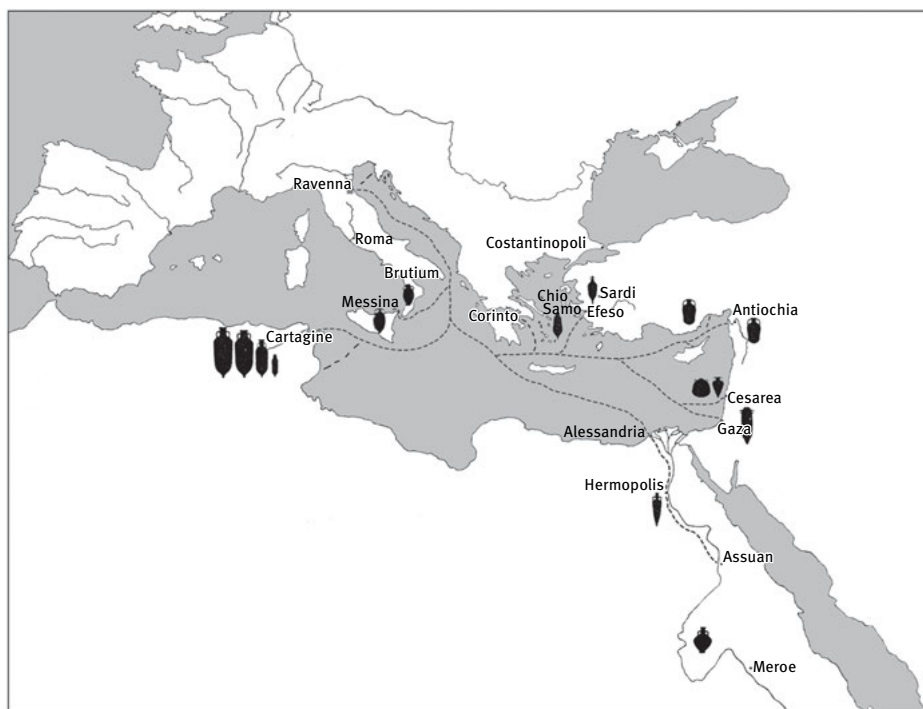


Fig. 1: Map, Ravenna and the Mediterranean trades between late antiquity and the early middle ages (© E. Cirelli).

²⁸ Cirelli 2007, 45–50; Cirelli 2014, 541–552.

²⁹ Cutler 1985, 20–37; Cutler 1993, 175; Cutler 1994, 56–65; Shalem 2004, 22. For medieval Europe, see most recently: Guérin 2013, 70–91.

³⁰ Cutler 1985, 24; Cutler 1987, 437–443; Chrzanovski 2007, 195–218; Olch Stern/Hadjilazaro Thimme 2007, 15. Alternative views, claiming an import of Indian tusk on the basis of textual evidence, shall be reconsidered as the adjective Indian was indistinctively used to qualify a provenience from India, Arabia, or Eastern Africa: Cosentino 2016, 115–130, especially 127 with references.

prove ivory production in late antique Ravenna, the city could well have supported it through its trade lines in its bone carving workshops.

A taste for ivory products is attested in Ravenna since the Roman times³¹ and this likely continued through Late Antiquity. In the 5th century, the circulation of ivory artifacts among the élites is well attested by textual and material evidence for the East as well as for the West.³² Ravenna's importance in this exchange can reasonably be hypothesized based on the city's position as an imperial seat, which attracted a large number of courtiers, and the prominent role of the bishop and his church officers among the ecclesiastical hierarchies of the empire.³³ A law issued by Valentinian, Theodosius I, and Arcadius in 384 allows only the *consules ordinarii* to distribute ivory diptychs. This law was passed in reaction to other, lesser officials, who were commissioning their own ivory diptychs³⁴ and was included in the Theodosian Code, issued in 438. Therefore, the production of ivory diptychs by élite members who did not achieved the consulate was still a problem even when Ravenna had become the seat of the western court and this law applied to the city as well. Not just diptychs, but also other objects made of ivory had important political and cultural cache and were given as gifts. For example, around 431, Patriarch Cyril of Alexandria sent diplomatic gifts to the court of Theodosius II (408–450) in Constantinople, including numerous ivory chairs and stools, in order to gain the imperial officials' benevolence and support for his cause at the Council of Ephesus.³⁵ This text is evidence of the circulation of ivory objects and of their appreciation among the members of the court. Since the western court residing in Ravenna at that time was related by lineage to the eastern court of Theodosius II, the court culture of Ravenna could not be so different from its eastern counterpart and likely included a high appreciation for ivory. Considering the value of ivory objects as luxury goods capable of expressing both the high status of the patron who commissioned them, as well as the esteem in which the patron regarded their recipients, there can be no doubt that such ivories circulated among the imperial and ecclesiastical élites of late antique Ravenna.

However, while for the 6th century there is clear evidence of the presence of such precious objects in the city – as I will show in the last part of this paper – none of the several late-antique specimens now held in museum collections can be firmly traced back to Ravenna in the 5th century. Previous research has tentatively

³¹ This is shown by the finds of the Roman period at Classe: Maioli 1990, 415–455.

³² Cutler 1987, 431–437; Cutler 1994, 19–40; St. Clair 2003, 7–14.

³³ For the élite society of Ravenna in the 5th and 6th century: Pietri 1991, 287–310; Orselli 1992, 405–422; Zangara 2000, 265–304; Mauskopf Deliyannis 2016, 39–52.

³⁴ *CTh* XV 9, 1 *pr.* For discussion: Citti/Ziosi 2007, 45–71, especially 54–55. Alan Cameron argues that this law did not apply to West (Cameron 1998, 384–403, especially 399). Discussing the silk vestments that the law mentions together with the diptychs, Roland Delmaire has however demonstrated that the law applied to the West as much as to the East and that there could be exceptions (Delmaire 1989, 451).

³⁵ Cyril of Alexandria, *Epistulae*, 96 (ed. Schwartz, 224–225). For discussion: Batiffol 1911, 247–264; Brown 1992, 16–18.

identified certain ivories as products of the ateliers of the city. Although, such claims cannot be supported by textual or archaeological evidence, the use of iconographies common to both ivories and Ravenna's mosaics and marble sculpture may perhaps show the impact of the artistic and intellectual milieu of fifth-century Ravenna on the art of ivory, if not of the circulation of certain ivory products in the city.

While the *pyxides* with testamentary scenes that Volbach attributed to Ravenna are now ascribed to a manufacture site located in Northern Africa, possibly at Alexandria,³⁶ his identification of the diptych panel held at the Cathedral Treasury of Milan as a product of Ravenna's ateliers has been recently developed by Zuzana Frantová (Figs. 2–3).³⁷ Each of two halves of the Milan five-piece diptych is dominated by a gemmed cloisonné jewel. On one side, the central cloisonné lamb is framed by five plaques with stories from the life of Jesus and Mary: the top plaque shows the Nativity flanked by two roundels with the symbols of the Evangelists Matthew and Luke, the bottom one the Massacre of the Innocents flanked by two roundels with the portrait of a man with long hair and beard; the vertical plaques flanking the central elements show each the Annunciation at the Well, the Magi following the Star, the Baptism and the Ordeal of the Bitter Water,³⁸ the Young Jesus in the Temple and the Entry into Jerusalem. The other half of the diptych centers on the cross on the mount, it is surrounded by the Adoration of the Magi flanked by the symbols of Mark and John on the top, the Changing of Water into Wine flanked by the effigies of the same man with long hair and beard on the bottom. The vertical plaques flanking the central elements show miracle scenes and images from Jesus's life each: one represents the Healing of the Blind Man, the Healing of the Lame, the Rising of Lazarus, the other one Christ giving Crowns to Martyrs, the Last Supper and the Gift of the Widow. The scenes from Jesus and Mary's lives are not arranged in a chronological or logical order and the choice of episodes does not find direct comparison in any other five-piece diptychs known so far. This has raised much scholarly discussion, recently leading Frantová to attribute the diptych to Ravenna. The author bases her arguments on a comparison between the design and style of the various individual plaques that make up either side of the diptych panel, and mosaics found in the fifth-century Mausoleum of Galla Placidia (425–450) and in the Orthodox Baptistry attributed to the bishopric of Neon (451-ca. 468). In particular, Frantová notes that the figures of the apostles in the mosaics and the human

³⁶ In particular, Volbach links the *pyxides* of the Museo della Cattedrale di Pesaro (6th century), the Musei Civici di Bologna and the Museo dell'Alto Medioevo at Rome (6th century) to Ravenna (Volbach 1977, 14, 20, 33, 49–50). For these group of *pyxides* see also: Engemann 1987, 176–182; Cutler 1993, 178–179; Bühl 2008. For the production of *pyxides* at Alexandria: Rodziewicz 2016, 87–91.

³⁷ Volbach 1977, 13–16; Frantová 2014.

³⁸ The scene has been interpreted also as the Presentation of the Virgin to the Temple or as representing the angel showing to the Virgin the light that illuminates the world. For discussion and references: Frantová 2014, 176–177.



Fig. 2: Five-piece ivory diptych, Cathedral Treasury, Milan: front (photo: Veneranda Fabbrica del Duomo di Milano, Milano).

figures of the ivory show all narrow shoulders and larger hips, thus a common design which is reflected also in the way the tunic folds envelop the bodies and fall.³⁹ However, it is implausible that the same artisan worked at the creation of both a mosaic dome and an ivory plaque.⁴⁰ While the style of monumental decoration in this case may have inspired ivory carving, the similarity of design may be better explained by the presence of the same iconographer behind these works or the circulation of model books that may have served as to disseminate common repertoires

³⁹ Frantová 2014, 111–113.

⁴⁰ Frantová is well aware of the difficulties in comparing monumental decoration and ivory carving (Frantová 2014, 111–115).

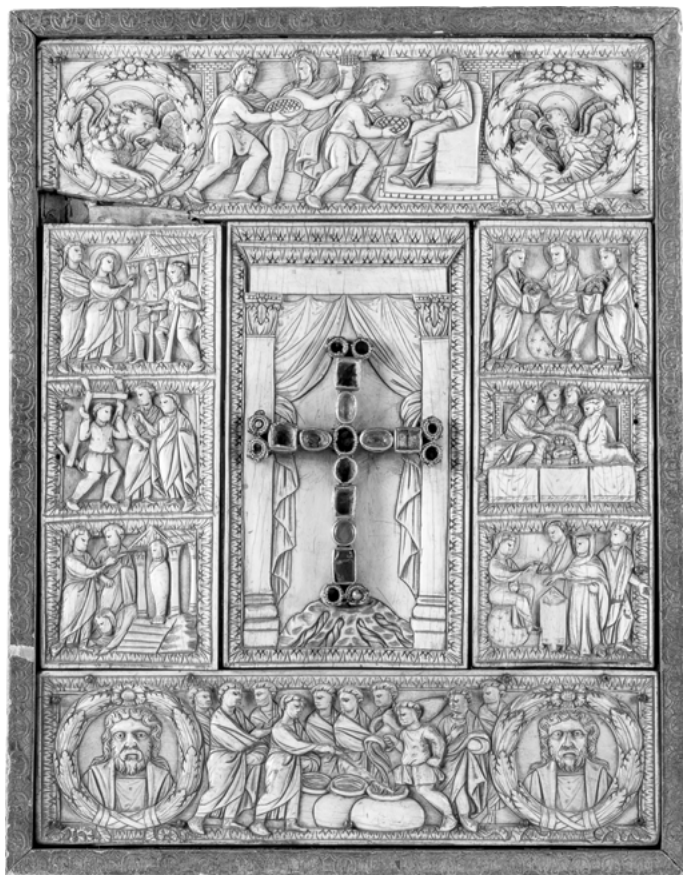


Fig. 3: Five-piece ivory diptych, Cathedral Treasury, Milan: back (photo: Veneranda Fabbrica del Duomo di Milano, Milano).

of forms and iconographies. The existence of such model books also during Late Antiquity is now generally accepted and may illuminate the similarities between works of art that are so different in technique and skills.⁴¹

More than style and design, according to Frantová, it is the analysis of the *cloisonné* lamb and cross at the center of the Milan panels that allows one to attribute it to the supposed workshops of Ravenna.⁴² Although no archeological record proves the existence of a jewelry workshop specialized in polychrome *cloisonné* in late

⁴¹ For model books: Donderer 2005, 59–68; Donderer 2005–06, 81–113; Settis 2006, 20–65; Stauffer 2008. For a later period: Scheller 1963; Scheller 1995; Demus 1970, 58–60; Kitzinger 1972, 99–142; Dauphin 1978, 400–423.

⁴² Frantová 2014, 115–124.

antique Ravenna,⁴³ the imperial city could indeed have had one. In fact, according to a theory advanced by Michel Kazanski and Patrick Périn and later developed by Marco Aimone, Ravenna had the means to access the raw materials necessary for the creation of polychrome *cloisonné* work through its harbor and commercial trade routes. It also had diplomatic connections to the major centers of Merovingian Gaul where such cloisonné jewels were found.⁴⁴ On the basis of the new research data on jewelry technique, Frantová claims that the lamb and cross on the diptych may reasonably have been the product of a jewelry workshop located in Ravenna at the time of emperor Majorian (457–461).⁴⁵ A dating from the time of Majorian is indeed plausible for the diptych, at least as a *terminus post quem*.

More significantly, the Milan ivory diptych panels offer evidence for the diffusion of a visual vocabulary that is routed in the artistic culture of Ravenna. Particularly, certain iconographic details of the individual plaques are typical of fifth-century Ravenna funerary sculpture. The coincidence of iconographies that feature Ravenna fifth-century sarcophagi and the diptych plaques – above all the lamb and cross – may reveal a common origin for both the sarcophagi and the Milan diptych. While it cannot be claimed with certainty that Ravenna was a center of production for jewelry and ivory, a local production of sarcophagi is attested by material evidence in the city for all the late antique period and written sources firmly locate in Ravenna a production of sarcophagi during the Ostrogothic Kingdom of Theoderic.⁴⁶ In Ravenna both stones from the northern Adriatic and the Marmara Sea were worked and, from there, sarcophagi were exported following sea and canal routes. The great presence of specimens of this kind of funerary sculpture within the city today as well as their uniformity in design, iconography, and decorative programs point to the presence in Ravenna of artisans capable of producing such elements and then trading them throughout Northern Italy and elsewhere through the commercial routes.⁴⁷ The

⁴³ For further considerations on this absence: Baldini Lippolis 1999, 240.

⁴⁴ Kazanski/Périn 2007, 29–37; Kazanski/Périn 2000, 15–18; Aimone 2011a, especially 483–487; and most recently: Aimone 2011b, especially 608–612.

⁴⁵ Frantová's point is based on the connections between Emperor Majorian and the city (Gillet 2001, 131–167) and Aimone's theories on the link between polychrome cloisonné jewelry and Ravenna (Frantová 2014, 116–124). It should be noted that Aimone's suggestion of Ravenna as a center for jewelry production is supported by strong historical arguments. Nevertheless, it is somewhat influenced by Volbach's attribution of an ivory manufacture to the imperial city (Aimone 2011a; Aimone 2011b).

⁴⁶ For Ravenna's sarcophagi: Bovini 1954; Lawrence 1970; Valenti Zucchini/Bucci 1968; Gabelmann 1973, especially 193–195; Russo 1974; Farioli 1977, 133–159; Kollwitz/Herdejürgen 1979; Dresken-Weiland 1998; Koch 2000, 378–398. A letter of Theoderic to the stonemason Daniel is testimony to the local production of sarcophagi from the years 507/511: Cassiodorus, *Variae* III, 19 (ed. Mommsen, 89; for a new translation and commentary of this text: *Varie*, ed. Giardina, Cecconi, Tantillo, I–VI, 2014–2016 that I was not able to access).

⁴⁷ For the diffusion of Ravennate sarcophagi in the Adriatic and the Italian peninsula: Gabelmann 1973, 91–191; most recently, but with reference to the Roman period: Russel 2013, 176–177.

preference for decorative elements such as the lamb and the cross in the sarcophagi from Ravenna dating from the second half of the 5th century may perhaps indicate a common origin also for the Milan ivory.

In fact, the lamb and the jeweled cross at the center of either side of the Milan diptych are common elements in the art of Ravenna, in general, just as the Milan diptych's wreath is echoed in Ravenna's abundant imagery of wreaths and garlands with fruits from every season, prolifically used to represent the prosperity coming from Christ – for instance at the Mausoleum of Galla Placidia, where fruit garlands show simple crosses in the center.⁴⁸ The design of the garland in the Milan diptych recalls the garlands that can be found on fourth-century Roman sarcophagi connected with the cross or *chrismon*, on the back of the fifth-century Capsella of Samagher, and represented surrounding the portrait of Saint Victor in the fifth-century dome of San Vittore in Ciel d'Oro, at Milan.⁴⁹ In Ravenna the garland was prolifically employed, especially in connection with the cross, the significance of which is linked with that of the sacrificial lamb. In fact, since the 5th century, the art of Ravenna shows a wide use of the lamb as a symbolic image for Christ. In funerary art, the nimbed lamb is usually found on the paradisiacal mount with the four rivers, such as on two sarcophagi traditionally attributed to Constantius III and Honorius at the mausoleum of Galla Placidia⁵⁰ and on a sarcophagus now at Sant'Apollinare in Classe,⁵¹ all dated between the middle of the 5th century and the beginning of the 6th century. In Ravenna, the lamb is represented inside a crown of fruits only in the sixth-century vault of San Vitale.⁵² All this evidence point to a development in the imagery of

48 The lamb appears for instance in several sarcophagi, while the garland surrounding the cross is found in the mosaics of the Mausoleum of Galla Placidia (425–450).

49 The garland of the five-piece diptych is divided into four sectors, each with different fruits and shows two ribbons at the bottom, just like the garland at the apex of the dome at San Vittore in Ciel d'Oro, the latter being a sign of honor for the martyr achieved in the sky after his sacrifice. The diptych garland also bears a flower at the top, thereby recalling analogous laurel garlands of the fourth-century Christian art of Rome, namely in two sarcophagi with scenes from Christ's Passion, both dated around 325–350 and held at the Musei Vaticani (nos. 28591 and 31525).

50 The so-called sarcophagus of Honorius or Valentinian III (end of the 5th-beginning of the 6th century) shows the lamb without nimbus but in connection to the cross, making clear the association with Christ. Valenti Zucchini/Bucci 1968, 42–43, 46–47 n. 22, 30; Kollwitz /Herdejürgen 1979, 77. For the sarcophagus of Constantius (end of the 5th-beginning of the 6th century): Kollwitz / Herdejürgen 1979, 78.

51 Valenti Zucchini/ Bucci 1968, 42–43, 47 n. 31; Kollwitz/ Herdejürgen 1979, 38–39, 70–72.

52 The same meaning of the central panel of the Milan diptych is perhaps to be found in Thessaloniki in the first half of the 5th century, at the apex of the dome of the Rotunda of St. George, where Christ once appeared inserted in a roundel surrounded by a row of stars and a garland with fruit. Elsewhere I have underlined the connections of the mosaics of the Rotunda, and specifically of this theme, with the art promoted by Galla Placidia in Ravenna (Carile 2012, 91–100). For the garland see also: Carile 2016, 53–86.

the wreath with fruits that, after its first appearance in Ravenna in the mosaics sponsored by Galla Placidia in the first half of the 5th century, may have acquired a new form in the second half of the century.

The gemmed cross on the reverse side of the Milan ivory panel is a particular kind of cross: for its shape, with the gems casts projecting out from it, recalls the flourishing *lignum crucis*, while its materials recall the gemmed Heavenly Jerusalem of Revelation. It stands on a mount with the four paradisiacal rivers, which reinforce the strong apocalyptic meaning of this image and, at the same time, declares that the sacrifice of Christ is a prefiguration of the salvation of humanity achieved in the last days.⁵³ The paradisiacal mount with the four rivers is rooted in the funerary visual language of Ravenna and, in the 6th century, it also appears in the apse mosaic of San Vitale, at the feet of Christ. It is found in connection with a monogrammatic cross at the side of a sarcophagus at Sant'Apollinare in Classe (end of the 5th-beginning of the 6th century)⁵⁴ (Fig. 4) and with the enthroned Christ, as we can see in the fifth-century sarcophagus of Saint Rinaldus in the Cathedral of Ravenna (Fig. 5).⁵⁵ The jeweled cross becomes frequent both in funerary sculpture and mosaic decoration from the time of Theoderic (493–525), in the form of a cross with its body covered in gems and straight arms – thus not a flourishing cross.⁵⁶ It is perhaps in the majestic example of the late fifth-century sarcophagus of Saint Barbatianus in the Chapel of the Madonna del Sudore at the Cathedral that it is best attested the imagery from which the Milan diptych draws (Fig. 6).⁵⁷ The lid of the coffin shows at the center a Christogram accompanied by A and Ω within a flowered garland with ribbons, while at the sides are two jeweled crosses with gems projecting out from the arms. Indeed, here the apocalyptic meaning of the image is made clear with the presence of the Greek letters (*Rev* 22:13) and the jeweled crosses at either side of Christ's monogram. The garland functions to glorify Christ and, at the same time, to remind viewers of his flourishing and renewing sacrifice, as well as

⁵³ For the meaning of the jeweled cross and the flourishing cross: Casartelli Novelli 1996, 143–145; Hellemo 1996, 114–116; Carile 2012, 85–86.

⁵⁴ Valenti Zucchini /Bucci 1968, 47–48 n. 32; Kollwitz/Herdejürgen 1979, 70.

⁵⁵ Valenti Zucchini /Bucci 1968, 34–35 n. 15; Kollwitz/Herdejürgen 1979, 65–66.

⁵⁶ As such, this cross is found on the sanctuary marble slabs in the Church of Sant'Apollinare Nuovo and in the mosaics of the Arian Baptistry. It also adorns the sixth-century fragmentary sarcophagus of Bishop Ecclesius (522–532/3) today at Santa Maria Maggiore. For the Sant'Apollinare Nuovo slabs: Angiolini Martinelli 1968, 71, 75 n. 132–133 (ca. 550–575); Deichmann 1974, 136–139. For Bishop Ecclesius' sarcophagus: Mazzotti 1953, 38–47; Valenti Zucchini/Bucci 1968, 50–51 n. 40; Kollwitz/Herdejürgen 1979, 79–81.

⁵⁷ This sarcophagus is variously dated on stylistic grounds from the end of the 5th to the second half of the 6th century: De Francovich 1957, 17–46 especially 29–31; Valenti Zucchini/Bucci 1968, 36–37 n. 17 (second half of the sixth century); Kollwitz/Herdejürgen 1979, 63–64, 125–126 (mid-5th century); Farioli 1980, 147–194 especially 175–182; Dresken-Weiland 1998, 119; Baldini Lippolis 2003, 225–238 especially 231–232; Jäggi 2013, 87–90.



Fig. 4: Sarcophagus, Basilica of Sant'Apollinare in Classe, Ravenna: mount with four rivers (photo: author).



Fig. 5: Sarcophagus of Saint Rinaldus, Cathedral, Ravenna: enthroned Christ over a mount with the four rivers (photo: author).



Fig. 6: Sarcophagus of Saint Barbatianus, Cathedral, Ravenna: lid with jeweled crosses (photo: author).

the new era coming with Christ's second *Parousia* in the last days. Indeed the central elements of the Milan diptych use the same components – namely the garland and the jeweled cross – and associate those with two other themes – the lamb, a symbolic expression of Christ, and the four rivers of paradise – to convey an analogous content. Thus, although the central elements of the Milan diptych do not find direct comparison in the art of Ravenna, their components and meaning draw from the visual language of the fifth-century imperial city.

Several other details of the Milan ivory find comparisons in the artistic culture of Ravenna. The shallow architectural representations framing the lamb and the cross, for example, can be seen on several sarcophagi and altar bases, where the *fenestrella confessionis* is similarly framed by columns and curtains drawn the sides.⁵⁸ In the 1970s, Volbach noted that the plaque with the adoration of the Magi reproduces a detail found on a fifth-century sarcophagus that is today in the basilica of San Vitale and, in the 7th century, held the body of the Exarch Isaac.⁵⁹ Just as on the ivory plaque, the second magus on the sarcophagus looks backwards. This is a peculiar feature, found elsewhere on the sarcophagus of Flavius Justus Catervius (beginning of the 5th century) in Tolentino.⁶⁰ In another marble object from Ravenna, the reliquary of Saints Quiricus and Julitta dating the beginning of the 5th-century,⁶¹ the second magus holds a tray decorated with two concentric circles that differentiate it from the

⁵⁸ For instance, in the altar of San Giovanni Evangelista (ca. 450–475), on a fragmentary altar front now at the Museo Arcivescovile (6th century), but also in the central opening of the *palatium* in the mosaics of Sant'Apollinare Nuovo. For the altar Angiolini Martinelli 1968, 18–19 n. 1 and 5.

⁵⁹ Volbach 1977. For the sarcophagus of Isaac: Rizzardi 1997, 177–178; Valenti Zucchini/Bucci 1968, 32–33 cat. n. 13; Kollwitz/Herdejürgen 1979, 55–56.

⁶⁰ Ioli 1971; Nestori 1996. This peculiarity is also found on a sixth-century *pixys* at Florence (Museo Nazionale del Bargello); Bovini 1956, pp. 49–50 n. 39.

⁶¹ Angiolini Martinelli, 1968, 81–82 n. 138 (ca. 440–450); Diemer 1977, 32–43; Novara 1991, 119–122.

trays held by the other Magi (Fig. 7).⁶² In the ivory, Mary is seated on a chair that is placed on a platform, a detail that is similar to the reliquary, where she sits on a chair with *suppedaneum*. Although in the ivory, the squeezed representation of the Adoration of the Magi is not directly comparable to the more dynamic and extended images on Isaac's marble coffin or on the reliquary, these features link the Milan diptych to iconographies that spread in Ravenna in the 5th century.



Fig. 7: Reliquary of Saints Quiricus and Julitta, Archiepiscopal Museum, Ravenna: magi (photo: Opera di Religione, Archidiocesi di Ravenna e Cervia, Ravenna).

Unfortunately, the narrative scenes that appear on the diptych are often rare images that do not find direct comparisons: this applies for example to the image interpreted as the Ordeal of the Bitter Water or the Twelve-Year Old Jesus at the Temple and may indicate an early date for the ivory. However, other scenes appear to have spread in the sculpture of fifth-century Ravenna and then in the sixth-century mosaics of the city, which offer the first instances of narrative images in the arts of Ravenna. For instance, the scenes of the Annunciation at the Well and the one interpreted as the Ordeal of the Bitter Water show a rare iconography, drawing from apocryphal texts that were known in Ravenna, as evidenced in the Annunciation on the sarcophagus Pignatta (5th-century).⁶³ Furthermore, the subject of the Raising of Lazarus, found among the smaller biblical scenes on the Milan ivory panel, was particularly frequent

⁶² Such differentiation perhaps reflects the differences between the two liquids, incense, and myrrh, and the solid gold brought as gifts by the Magi. I thank Antonio Panaino for this suggestion. Interestingly, this differentiation is not discussed by Cumont (Cumont 1932, 82–105).

⁶³ For the sarcophagus Pignatta and its iconography: Testini 1977 321–337; Kollwitz/Herdejürgen 1979, 54–55; Baldini Lippolis 2003; Jäggi 2013, 87–90.

in the funerary art of Ravenna: it is found on the already mentioned sarcophagus of Isaac and on a sarcophagus from the church of St. John the Baptist now at the Museo Nazionale, both dating from the 5th century (Fig. 8).⁶⁴ Yet, in these cases, Lazarus is shown inside an arched aedicule raised on a platform or on steps; the only figures of the scene are Christ and Lazarus. On the ivory plaque, the image follows closely the iconography that we find at Sant'Apollinare Nuovo (493–526): the tomb is in the form of a small temple and Christ is accompanied by an apostle; though in the mosaic, the composition is reversed and Lazarus's sister, Mary, is absent.



Fig. 8: Sarcophagus of the Exarch Isaac from the church of St. John the Baptist, now in the Basilica of S. Vitale, Ravenna (photo: author).

The ivory's miracle scenes have iconographic schemes that can also be seen in the mosaics of Sant'Apollinare Nuovo,⁶⁵ including the Transformation of the Water into Wine, as well as of the Last Supper. The only other late antique image of the Gift of the Widow than the one that is found on the ivory is similarly from Sant'Apollinare Nuovo, but the iconography differs in the placement of the figures and Christ, who

⁶⁴ For the sarcophagus at the Museo Nazionale, the so-called "*traditio legis*" sarcophagus: Valenti Zucchini/Bucci 1968, 29–30 n. 10; Kollwitz/Herdejürgen 1979, 56–57.

⁶⁵ Nineteenth-century restoration works altered the original iconography of the mosaic that is recorded in a seventeenth-century drawing by Ciampini (Ciampini 1690–99, II, 96, tav. 27). For this mosaic: Bovini 1950, 20–39, especially 33; Deichmann 1969, 182.

is shown standing and not seated on a globe as in the ivory. Other miracles of Christ have also been represented in the Christological cycle of Sant'Apollinare Nuovo, such as the Healing of the Blind Man, while further comparisons between the typical scenes on the ivory and the mosaics from Sant'Apollinare Nuovo reveal pronounced variations, such as the Healing of the Paralytic at Bethesda that shows the paralytic turned towards Christ. Also the Baptism scene follows a different tradition: it omits the personification of the river Jordan, common to the mosaics of the Orthodox and Arian baptistery at Ravenna.

Thus, the iconographies of the Milan ivory do find comparison in the arts of Ravenna, particularly in the 5th century, although they have features that anticipate the sixth-century themes visible in Ravenna mosaics. In fact, the representation of the Last Supper finds remarkable comparisons in the mosaics of Sant'Apollinare Nuovo, while the plaque with Christ donating crowns to the martyrs strikingly resembles the apse mosaic of San Vitale (ca. 547/8) with Christ seated onto a globe. Surely, the Milan diptych pertains to an analogous visual culture in which the representation of the life and the miracles was connected to an apocalyptic perspective that celebrated the role of Christ as the Savior even in the last days. This perspective may be found in the symbolic representations of the sarcophagi more than in the decorative program of Sant'Apollinare Nuovo, itself an Arian monument the iconography of which was not substantially differentiated from orthodox imagery.⁶⁶ The Milan diptych then may well have been created in Ravenna, possibly in the second half of the 5th century, when the development of Christian speculation, the diffusion of apocryphal texts and the taste for an imagery merging symbolic and narrative themes had already developed. Probably, as Frantová as rightly pointed out, only a better understanding of the origins of the *cloisonné* polychrome jewelry of the Milan diptych will allow us to solve the problem of the place where it was produced, although Ravenna may indeed represent a strong candidate.

Another ivory attributed to Ravenna is the Bryn Athyn plaque, dated to the 5th or 6th century (Fig. 9).⁶⁷ It shows saint Peter holding the keys and a cruciform rod set above a mount from which spring the four rivers of paradise. The figure is framed by a niche, the top of which is shaped in the form of a shell. On the basis of the mount with the four rivers and the shell motif that features in the mosaics of both the Mausoleum of Galla Placidia and Sant'Apollinare Nuovo, it has been attributed to Ravenna.⁶⁸ Although all of these elements are indeed part of the visual vocabulary of

⁶⁶ On the existence of a supposed "Arian iconography", see with different points of view: Penni Iacco 2011; Carile/Cirelli 2015, 97–127.

⁶⁷ Griffing 1938 266–279; Gómez Moreno 1968, n. 70 dates it to the 5th century; Volbach 1976, n. 134 dates it to the 6th century; Patterson Ševčenko 1977, 539–540 cat. n. 485, dates it to around 500. For a complete bibliographical discussion: Nikolajević 1989, pp. 429–441.

⁶⁸ Interestingly, however, Volbach omits the plaque from his work on Ravenna school of ivory carving.



Fig. 9: Ivory plaque, Glencairn Museum, Bryn Athyn (photo: courtesy of the Glencairn Museum, Bryn Athyn, Pennsylvania).

the city that used the mount with the four rivers in an apocalyptic-paradisiacal perspective and the shell motif for visualizing the importance of the person or symbol placed underneath it, indeed such a composition as a whole is absent from the visual repertoire of the city. In particular, the cross on the paradisiacal mount never appears as being held by a saint. This unique iconography has led scholars to claim that the plaque is a forgery.⁶⁹ However, Anthony Cutler has demonstrated that the technical details and fabric of the ivory are common to fifth and sixth-century ivories, proposing a

⁶⁹ Nikolajević 1979.

date within the 5th century.⁷⁰ Cutler has rightly pointed out that the cross here is not the cross on the paradisiacal mount that appears in the form of a monogrammatic cross in several sarcophagi from Ravenna or a jeweled cross, but the cross of Saint Peter's martyrdom. On the sarcophagus of the twelve apostles at Sant'Apollinare in Classe, Peter appears to hold both the keys and his cross, and on the already-mentioned sarcophagus of Rinaldus at the Cathedral the crown and the cross (Fig. 5).⁷¹ In this case, the paradisiacal mount may express the achievement of paradise through Peter's martyrdom more than the rock springing water with which Peter baptized his guards in the apocryphal Acts.⁷² Comparing this plaque and the lid of the *Capsella Africana*, where a martyr is analogously shown on a paradisiacal mount while holding the crown of his martyrdom and being crowned by the hand of God, Galit Noga-Banai underlines that such rare iconographies show the martyrs modeled after Christ, carrying the latter's power within them.⁷³ The provenance of the plaque as being from Ravenna cannot be ruled out: in the second half of the 5th century, Bishop Neon built a church dedicated to Saints Peter and Paul (the *Basilica Apostolorum*, today known as



Fig. 10: Apse mosaic, Basilica di San Vitale, Ravenna (photo: Petar Milošević; Creative Commons Attribution-Share Alike 4.0 International).

⁷⁰ Cutler 2001, 27–32.

⁷¹ For the sarcophagus of the twelve apostles (mid-5th century): Kollwitz/Herdejürgen 1979, 66–67. For the sarcophagus of Rinaldus, see above.

⁷² For this last interpretation: Cutler 2001, 30–31.

⁷³ Noga-Banai 2008, 66–67.

San Francesco). The interior decoration of the church featured a mosaic with Peter and Paul flanking a cross,⁷⁴ an imagery that seems at least partially echoed in the Bryn Athyn ivory plaque.⁷⁵ For the iconographic features of the ivory plaque and its connections to fifth-century art of Ravenna, the ivory may indeed have been produced in the city.

On the basis of the presence of the court in Ravenna, several consular diptychs are also attributed to a manufacture possibly located in Ravenna. For instance, this is the case of the Halberstadt diptych (417), identified with an image of Constantius III, Galla Placidia's second husband and short-lived emperor of the West in 421,⁷⁶ or of Orestes, consul in 530 under the Ostrogothic reign of Amalasuntha and Athalaric.⁷⁷ However, none of these diptychs show elements that can be attributed exclusively to the iconographic repertory of late antique Ravenna. Rather, they demonstrate the diffusion of a visual language common to the members of the imperial administration of the empire, using analogous representational schemes and symbols of authority expressing their power and social status. By contrast, we may effectively see some features typical of Ravenna in the anonymous diptych of a *patricius* now in Novara, generally dated between 425 and 450.⁷⁸ (Fig. 11) Volbach already tentatively attributed it to Ravenna.⁷⁹ Indeed, the overall iconographic scheme with the two columns and curtains framing the central figure resembles the central panels of the Milan diptych panel and even the shallow relief of the architectural representation finds comparisons in the Milan diptych. Although the Novara diptych's details – like column capitals, lintels and curtains – are different from the Milan example,⁸⁰ there are nonetheless certain traits in common between these ivories.

⁷⁴ *LPRa* 30 (*De Neone*) (ed. Mauskopf Deliyannis, 184).

⁷⁵ If, as hypothesized, the ivory plaque showing an apostle now at the Victoria and Albert Museum in London was a product of the ateliers of Ravenna, this could demonstrate the diffusion of ivories with representations of apostles in fifth-century Ravenna (Williamson 2010, 40–41 cat. n. 4).

⁷⁶ For the first time, Richard Delbrueck recognized in the diptych a portrait of Constantius III made in 417 (Delbrueck 1929, n. 2; Volbach 1976, n. 34). Alan Cameron has argued for his identification with Constantius *consul* of the east in 413 (Cameron 1998, 384–403. However, this new interpretation has been convincingly opposed by: Engemann 1999, 158–168; Bühl 2001, 193–206; Olovsson 2005, 20–23, 98–100, 109. For a possible production in Ravenna: Volbach 1977, 27–28; Bühl 2001, 193–206.

⁷⁷ Delbrueck 1929, n. 32; Volbach 1976, n. 31; Netzer 1983, 265–271 (claiming that this was indeed made in Constantinople for Clementinus in 513 and then recut in 530); Olovsson 2005, 30–34. For the provenance of the diptych from Ravenna: Volbach 1977, 10, 23, 37.

⁷⁸ Delbrueck 1929, 248 n. 64; Volbach 1976, 43 n. 64; Galletti 2007, 216–219 cat. n. 58 (with references).

⁷⁹ Volbach 1977, 27–29.

⁸⁰ It is worth noticing that in the Milan diptych the architectural representations of the central panels are similar, but not exactly the same: for instance the acanthus leaves of the capitals differ considerably, showing the hand of two different carvers.

While the written sources do not help our understanding of the diffusion of ivory products in fifth-century Ravenna, we may assume that these goods circulated on the basis of the wide dissemination of ivory objects as symbols of status among the élites.⁸¹ Even at the court of Theoderic, these objects may have been present and surely the intellectuals related to Theoderic had a certain acquaintance with the use of ivory as an expression of the taste and refinement of the ruling classes. Cassiodorus, a well trained Roman of the highest rank in the Ostrogothic administration, does not mention the art of ivory but for one topical passage that is itself revealing of the influence of Graeco-Roman culture on the Ostrogothic court, where ivory was valued as an expensive and precious material. Celebrating the magnificence of the eternal city, Cassiodorus compares Rome to the seven beauties of the earth, among which was the statue of Olympian Jove, made of gold and ivory by the hand of Phidias.⁸² The literary's acquaintance with ivory products may be inferred from a later text of religious content, where Cassiodorus exalts the virtue of chastity by comparing it to ivory – and the elephant, from which ivory comes, an intelligent and disciplined animal, according to Cassiodorus.⁸³ In particular, in this text the author recalls the “ivory palaces” (*domus eburneae*) of the Lord's bride (the Church), clarifying that these adorned palaces should not be interpreted as mere luxury houses, but as the residences of chaste women, the kings' daughters, the latter being the faithful or the children of the ruling classes who often follow Christ in glory. In this passage, we may see an indication for his understanding of the place of ivory in the contemporary culture of the élite class. Apart from its value in the scriptural commentary, here, ivory is a synonymous with luxury and, particularly, with the extreme wealth of contemporary palaces (*domus eburneae*): otherwise, Cassiodorus would not feel the need to clarify to his reader that in this case it is used as a metaphor for chastity. Similarly in the same years, in a passage of his philosophical work, Boethius mentions a library decorated with ivory, glass, and furnished with comfortable chairs,⁸⁴ a useless comfort if man had not ideas and opinions. These texts clarify the spread of the use of ivory among the élites as an element in the imagery of great and magnificent mansions, as well as of refinement and culture.

Yet it is only by the middle of the 6th century that we have clear evidence for the diffusion of ivory objects in Ravenna and their use among the highest members of the élites. The famous ivory-reveted *cathedra* of Bishop Maximian (546–557) is the most striking proof. Unlike other outstanding late antique ivory artifacts that came into the

⁸¹ For the role of ivory as an indicator of social status: Cutler 1987, 432–437; Cutler 1993, 187; Sena Chiesa 2005, 188–201.

⁸² Cassiodorus, *Variae* VII, 15.

⁸³ Cassiodorus, *Expositio Psalmorum* XLIV, 10 and 17 (ed. Adriaen 1958). Scholars emphasize that this passage is replete with Virgilian echoes (Ceresa-Gastaldo 1968, 304–309); however this does not diminish its importance as an evidence of the value of ivory objects for Cassiodorus.

⁸⁴ Boethius, *De consolazione philosophiae* I, 5 (ed. Bieler 1958, 13).

city collections at a later age, such as the diptych of Murano (6th century),⁸⁵ its link to late antique Ravenna and the city's élites is testified by its monogram and plausible historical sources. The monogram decorating the front of the chair has been recognized as Bishop Maximian's on the basis of comparisons with other monograms found on the architectural elements that once decorated the Church of Sant'Andrea Maggiore, built under his patronage.⁸⁶ In the 11th century, John the Deacon records that in 1001, Doge Peter II Orseolo of Venice donated to emperor Otto III a *cathedra elephantis artificiosa sculpta tabulis*, in an exchange of gifts between the two allies. The emperor, who resided in Ravenna, left the chair in the city.⁸⁷ Scholars have associated Maximian's chair with that *cathedra*. Accordingly, the chair was first taken by the Venetians sometime between 6th and the 10th century and then brought back to Ravenna in 1001 as an imperial gift.⁸⁸ Or, perhaps the Doge brought the ivory chair from Pola, where Maximian lived before taking office in Ravenna, and then donated it to the emperor:⁸⁹ however, there is no reason to suppose that the bishop of Ravenna had his *cathedra* in Pola, the enduring connections of Maximian with the latter city notwithstanding.⁹⁰ John's record seems quite reliable, since the author witnessed the donation. Certainly, he could have been referring to another ivory chair;⁹¹ however, this might be the first literary reference to Maximian's *cathedra* in historical sources.⁹² Either if the *cathedra* was previously in Ravenna since the bishopric of Maximian or it was brought from Venice in 1001, its certain association with one of the most prominent figures in late-antique Ravenna attests for the use of and taste for ivory objects among the sixth-century élites of the city.

Maximian had strong relationship with the court of Constantinople, as well as with the highest élites of the empire. Justinian put him on the archiepiscopal chair

85 Wessel 1958, 11–127; Furlan 1960, 142–151; Rizzardi 1994, 486–496; for a new reading in the context of sixth-century ivory production: Cailliet 2008. For the ivory collections acquired by various local institutions starting from the 18th century and now at the Museo Nazionale: Martini/Rizzardi 1990.

86 Gerola first recognized the monogram on the ivory chair as Maximian's: Gerola 1915, 807–813. The other monogram is on an impost block coming from the church of Sant'Andrea Maggiore and now held at the Museo Arcivescovile (Deichmann 1976, 305–7 and fig. 173; Farioli 1969, 86 cat. n. 183, fig. 152). For the churches built by Maximian: Mazzotti 1956, 5–30; Bovini 1957, 5–27; Montanari 1991, 368–416. For the church built by Maximian to host the relics of Saint Andrew: *LPRA* 76 and 82–83 (*De Maximiano*) (ed. Mauskopf Deliyannis, 243, 250).

87 Iohannes Diaconus, *Chronicum Venetum* s.a. 1001 (ed. Pertz 1846, 34).

88 Ricci 1898, 1–4.

89 Bettini 1974, 19.

90 For the possessions of the church of Ravenna in Istria during Maximian's bishopric: Fasoli 1991, 389–400, especially 394–397; Grah 2005, 49–60.

91 This is the opinion of: Cecchelli 1936–44, I, 27–32.

92 The first mention of the *cathedra* in the Archibishopric of Ravenna dates 1553 ca.: Mazzotti 1954, 483–492. For the history of the chair after the 17th century: Cecchelli 1936–44, I, 17–25.

of Ravenna, imposing him upon the leading classes of the city that, after initial resistance, eventually accepted him.⁹³ During his bishopric he actively supported Justinian's politics, especially those concerning the schism of the Three Chapters that was dividing the empire, and he visited the emperor at Constantinople on at least two occasions while he was the leader of the Church of Ravenna.⁹⁴ Because of the strong ties between Maximian and Justinian, the *cathedra* has been interpreted either as Justinian's gift or as a work sponsored by the archbishop.⁹⁵ However, by virtue of chair's iconographic program, the ivory throne was plausibly attributed to the patronage of Maximian himself. As a whole, the program appears to be a celebration of the theological and political positions of the bishop, without direct reference to the emperor.⁹⁶ The front of the chair is particularly telling in this respect: on it, Maximian's monogram is centrally placed above the image of John the Baptist surrounded by the evangelists, and beneath the plaque with Christ *Pantokrator* at the apex of the backrest (Fig. 12). Thus, visually the chair conveys the idea of the power and role of the archbishop: Maximian here is a continuator of the Baptist's work – and of the evangelists – at Christ's behest.

Indeed, an analogous message is expressed also in the spatial arrangement of liturgical furniture and mosaics at the basilica of San Vitale, completed by Maximian 547/8. There, in the apse, the marble bishop chair stands in the middle of the *synthronon* right below the image of Christ *Pantokrator* in the apse conch (Fig. 10).⁹⁷ The faithful gathered in the nave would have attended to a demonstration of the bishop's role within the Christian hierarchy, being the bishop the representative of Christ on Earth. On Maximian's chair, the message is even stronger, as all the images are surrounded by vine leaves and inhabited scroll-work reproducing a paradisiacal environment. The chair declares the role of the bishop in the Christian hierarchy, a heavenly role achieved by virtue of his earthly appointment. Evidence that the chair has

⁹³ *LPRA* 70 (*De Maximiano*) (ed. Mauskopf Deliyannis, 239).

⁹⁴ Montanari 1991 368–416; Cosentino 2008, 234–235; Mauskopf Deliyannis 2010, 209–219.

⁹⁵ Against a supposed dating of the *cathedra* before 546 by virtue of the monogram read as Maximianus *Episcopus*: Farioli 2005, 165–168. Here I am not discussing the enormous scholarly literature on Maximian's *cathedra*, for references see: Bovini 1990; Farioli Campanati 2000, 94–97. For the discussion of its artistic context: Farioli 1992, 127–157; Gaborit-Chopin 1992, 42–45.

⁹⁶ For the theological reading of the program and the interpretation of the *cathedra* as a product of Maximian's patronage: Montanari 1991, 368–416.

⁹⁷ The original marble work cladding the apse wall was first replaced by wood during the 16th century and by marble slabs around 1863. Between 1900 and 1904, analysis of the remaining archaeological evidence proved the original existence of the *synthronon* and the central bishop chair. See correspondence between Icilio Bocci, responsible for the excavation works, and Corrado Ricci: Ravenna, Biblioteca Classense, Carteggio Ricci Monumenti, Letter by Icilio Bocci, 9 March 1900. This allowed the reconstruction of the apse as we see it today, around the years 1910'. Evidence of the original *synthronon*, in fact a *subsellium*, can be seen in the photographs now held at the Biblioteca Classense (Ravenna, Biblioteca Classense, Fondo Fotografico Ricci, n. 1652).

(a)



(b)



Fig. 11a–b: So-called diptych of the *patricius*, Musei della Canonica del Duomo, Novara (photo: courtesy of the Musei della Canonica del Duomo di Novara, Novara, Italy).

heavenly significance is seen in the two peacocks carved at either side of the monogram, strong symbols of eternity that were associated with paradisiacal imagery since antiquity. This message is particular suitable for a *cathedra*, meant to be displayed in the bishop's palace during ceremonies of semi-private character. The fact that the *cathedra* may not have been destined to be used as a chair notwithstanding,⁹⁸ this object is nevertheless extremely important to the bishop's role and his self-perception in the 6th century. Furthermore, by having represented the stories of Joseph, significantly located on the arms of the chair, Maximian declared his position in the hierarchy of the empire: a loyal vice-king himself capable of ruling without interfering with the king of Egypt.⁹⁹ Indeed, the iconographical program of the chair is

⁹⁸ For the hypothesis that the *cathedra* was not intended to be used but only displayed: Farioli Campanati 2000. However, the ebanus with which was made the original structure is a strong material that would have allowed the use of the *cathedra* as a chair.

⁹⁹ Montanari 1984–85, 305–322.



Fig. 12: Maximian's ivory chair, Archiepiscopal Museum, Ravenna: front (photo: Opera di Religione, Arcidiocesi di Ravenna e Cervia, Ravenna).

more understandable as a personal declaration by the bishop, one that finds visual comparisons in the other monuments sponsored by Maximian in the city, more than as a reflection of the mentality of an emperor like Justinian.

Recent research has recognized that the ivories assembled in the chair come from three different hands, or that there were three groups of carvers assigned to the three separate narrative cycles: the infancy plaques, the miracles plaques, and Joseph plaques.¹⁰⁰ This does not necessarily mean that the chair was only assembled in Ravenna, where workers joined together three groups of tablets coming

¹⁰⁰ Deichmann 1989, 348; Bovini 1990.

from different areas of the Mediterranean.¹⁰¹ Rather, it shows that there were different artisans with different styles at work. According to one important theory, the *cathedra* may have been a product of the workshop at Constantinople.¹⁰² This attribution is not only due to the Greek characters on the back of the plaques, which could have been written by a Greek in Ravenna, the inhabitants of which in the 6th century included Greeks, Syrians, Jews and Goths.¹⁰³ Comparison with the Constantinopolitan Christ and the Virgin's ivory diptych, now in Berlin, reveals striking similarities in iconography and style to Maximian's chair (Fig. 13).¹⁰⁴ The compositional scheme, architectural features, and figures of the Berlin ivories find exceptional comparisons with the plaques representing John the Baptist and the four evangelists on the front of Maximian's chair.¹⁰⁵ What is more, the Berlin ivories originally showed a detail that linked them directly to the *cathedra* itself, and to Maximian. The lower part of the plaque was cut out, leaving a few fragments of an inscription that once formed a monogram of Maximian. Thanks to a detailed analysis, Gudrun Bühl was able to reconstruct the monogram as a variant of the one that is still visible on the *cathedra*, firmly connecting the Berlin ivories to Archbishop Maximian,¹⁰⁶ who apparently had an affinity for ivory products of religious content. It also sets the date of production for these artifacts to the middle of the 6th century. By means of comparison to other five-piece diptychs that have been attributed to Constantinople,¹⁰⁷ it appears that in the middle of the 6th century, Constantinople was a very active center of ivory production and that the most important members of the élites of the empire – like Maximian – must have received these objects from the capital. Another important piece of evidence that attaches the Berlin diptych to the city of Ravenna is a list of names, written on the back of the panels. According to paleographic analysis, it is an early form of half-uncial script, used in Northern Italy until the middle of the 6th century, a calligraphy that can be found in other manuscripts from sixth-century Ravenna,¹⁰⁸ suggesting that the plaques were inscribed with these names in Ravenna,

101 Labarte 1864–66, I, 17. For discussion of the various theories on the provenience of the *cathedra*: Volbach 1977, 38–39, 46–49.

102 On the basis of these Greek characters, Deichmann supposed the provenience of the chair from Constantinople or Asia Minor (Deichmann 1969, 76; Deichmann, 1989, 348). For the Greek characters: Cecchelli 1936–44, III, 45–57. See also: Farioli Campanati 1992; Gaborit-Chopin 1992.

103 For the cosmopolitan society of Ravenna in the 6th century (especially after 540): Brown 1991, 135–149.

104 Berlin, Bode Museum, inv. n. 564 and 565.

105 For discussion: Bühl 1999, 21–26; Bühl 2000, 76–77 n. 19; Bühl 2002, 81–97; Farioli Campanati 1992.

106 Bühl 2002, 81–97; Bühl 2000, 76–77 n. 19.

107 Caillet 2008.

108 In particular Arwed Arnulf finds comparisons with the script of a manuscript now at the Archivio Arcivescovile, s.n., f. 46 containing the *De Fide* by Ambrose (Arnulf 1993, 134–139). For a discussion see also: Bühl 2002, 81–97 who corrects the list at the light of new archive documents.



Fig. 13: Ivory diptych with Christ and the Virgin, Bode Museen, Berlin (photo: WikimediaCommons; Creative Commons CC0 1.0 Universal Public Domain Dedication).

as would have been typical for the time period in which diptychs were used as commemorative register of those deserving veneration.

The list is fragmentary, as the diptych was cut down at a later period, but corresponds to a series of saints, some of whom have been recognized to be of Roman origins, some others from Aquileia or Asia Minor, which do not find parallels in any known *martyrologion* or calendar.¹⁰⁹ Although scholars have underlined the personal character of this catalogue, which seems to correspond to a series of saints particularly venerated by the person who wrote it, it is worth noticing that at least twelve or thirteen saints out of twenty-four saints recognizable in the inscriptions

¹⁰⁹ Solin 1995, 357–370; Bühl 2002, 88–94 with important considerations and comparative chart.

were venerated in Ravenna in the sixth century.¹¹⁰ Speculating on the possible identification of the person who received the ivory based on the list alone would be pure fantasy. However, the presence of the monogram's fragment on the ivory connects it to Maximian and the script of the register of saints links it to manuscripts from Ravenna, firmly placing the Berlin ivory in the city at the time of Maximian. The list of saints, moreover, sheds new light on the devotional or liturgical role of ivories of religious content in sixth-century Ravenna.

Another *pyxis*, the style of which finds comparison in the Christological plaques of Maximian chair,¹¹¹ may be evidence for the great favor that ivory objects received in sixth-century liturgical contexts in the area of the Pentapolis, where, after 540, Ravenna was the most important city – supposing that the *pyxis*, now at the Cathedral Treasury of Pesaro, was in this area since antiquity.¹¹² In any case, the ivories connected with Maximian are evidence of the taste of the empire élites for ivory as a symbol of status and a means to express the culture and sophistication of the highest members of Ravenna's high society. Furthermore, ivories of religious content may well have served as liturgical objects in the city and its surroundings, as signs of personal devotion or expressions of the means of the church.

In conclusion, recent research on late antique ivory carving has shown that its manufacture in a given center depended upon the city's access to supplies of raw material, the presence of skilled craftsmen, the cultural requirements for ivory products, and the city's prominence in major trade routes to distribute those products.¹¹³ In the fifth as much as in the 6th century, Ravenna certainly had the means to receive tusk and, conversely, to distribute ivories around the Mediterranean. Since it was a lively commercial center, a seat for the western court in the first half of the 5th century and later an outpost of the imperial administration, likely it also attracted skilled artisans. Furthermore, from extant evidence, it appears that the visual language of the arts of Ravenna also had an impact on ivory-craft, which may indicate the production of ivory in the city as early as the 5th century. Later, in the 6th century, the abundance of ivory artifacts connected to Maximian and the members of the élites of Ravenna prove the power of this material as a medium to express the social status, education, refinement, and religious affiliation of the city's leading class. However, without clear archaeological data, the production of ivory artifacts cannot be claimed with certainty for late antique Ravenna. In short, if there is no definitive archaeological proof that Ravenna ever manufactured ivory, there is still enough evidence to assert that it had the requirements to do so. Moreover, for the wealthy people living in one of the most

110 The fragmentary list included thirty-one names on the back of the Virgin's plaque and at least another three names on the back of Christ's plaque (Bühl 2002, 92).

111 Russo 1989, 79–147, especially 99–102.

112 Unfortunately the first records about the *pyxis* date to the 18th century (Rizzardi 1985, 609–620).

113 Cutler 1993, 10.

prominent cities of the empire, ivory was an important medium for their cultural expression, which would have almost certainly drawn artisans and positioned Ravenna as a potential center for late antique ivory carving.

Bibliography

Primary Sources

- Boethius, *Philosophiae consolatio*, edidit L. Bieler (Corpus Christianorum, Series Latina, 94). Turnhout 1958.
- Cassiodorus, *Expositio Psalmorum*, edidit M. A. Adriaen (Corpus Christianorum, Series Latina, 97), I-II, Turnhout 1958.
- Cyril of Alexandria, *Epistulae*, ediderunt E. Schwartz et al., Berlin 1922.
- Iohannes Diaconus, *Chronicum Venetum et Gradense*, edidit G.H. Pertz, in *MGH, SS*, VII, Hannoverae 1846, 1–47.

Secondary Sources

- Aimone, Marco. 2011a. “Nuovi dati sull’oreficeria a cloisonné in Italia fra V e VI secolo. Ricerche stilistiche, indagini tecniche, questioni cronologiche.” *Archeologia Medievale* 38: 459–506.
- Aimone, Marco. 2011b. “Ricerche sul costume dei chlamydati nei secoli V e VI. Le fibule a croce latina d’oro e d’argento dei tesori di Ténès e Desana.” *Studi Medievali* 52.2: 577–638.
- Angiolini Martinelli, Patrizia. 1968. *Corpus della scultura paleocristiana, bizantina ed altomedioevale di Ravenna*, I. Altari, amboni, cibori, cornici, plutei con figure di animali e con intrecci, transenne e frammenti vari. Roma.
- Arnulf, Arwed. 1993. “Die Namenliste des Berliner Christus-Maria-Diptychons.” *Jahrbuch für Antike und Christentum* 36: 134–139.
- Augenti, Augenti. 2005. “(RA, Ravenna) Classe, podere Chiavichetta. 2004–2005.” *Archeologia Medievale* 32: 239–240.
- Augenti, Andrea. 2013. “Classe: archeologia di una città scomparsa.” In *Potere e politica nell’età della famiglia teodosiana (395–455): i linguaggi dell’impero, le identità dei barbari*, edited by Isabella Baldini and Salvatore Cosentino, 219–236. Bari.
- Augenti, Andrea and Bertelli, Carlo, eds. 2007. *Felix Ravenna. La croce, la spada, la vela: l’Alto Adriatico fra V e VI secolo*. Milano 2007.
- Baldini Lippolis, Isabella. 1999. *L’oreficeria nell’Impero di Costantinopoli tra IV e VII secolo*. Bari.
- Baldini Lippolis, Isabella. 2003. “S. Lorenzo in Cesarea e il problema di lettura iconografica del sarcofago Pignatta.” In *Atti del VII Congresso Nazionale di Archeologia Cristiana*, edited by Eugenio Russo, 225–238. Cassino.
- Batiffol, Pierre. 1911. “Les présents de Saint Cyrille à la cour de Constantinople.” *Bulletin d’Ancienne Literature et d’Archéologie Chrétiennes* 1: 247–264.
- Bertelli, Carlo. 1992. “Le arti sontuarie: prestigio sociale e tesaurizzazione.” In *Storia di Ravenna*, II/2. *Dall’età bizantina all’età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 177–188. Venezia.

- Bettini, Sergio. 1974. "Saggio introduttivo." In *Venezia e Bisanzio (Venezia, Palazzo ducale, 8 giugno-30 settembre 1974)*, edited by Italo Furlan. Milano.
- Bianchi, Chiara. 2007. "Strumenti e tecniche di lavorazione dell'avorio e dell'osso." In Eburnea Diptycha. *I dittici eburnei tra Antichità e Medioevo*, edited by Max David, 349–386. Bari.
- Bovini, Giuseppe. 1950. "L'ultimo pannello musivo della parete sinistra della chiesa di S. Apollinare Nuovo in Ravenna ed il problema del suo restauro." *Felix Ravenna* 2: 20–39.
- Bovini, Giuseppe. 1954. *Sarcofagi paleocristiani di Ravenna: tentativo di classificazione cronologica*. Roma.
- Bovini, Giuseppe. 1956. "Pisside con Angelo annunciante la nascita del Salvatore e adorazione dei Magi." In *Catalogo della mostra degli avori dell'alto medioevo*, edited by Giuseppe Bovini and Luisa B. Ottolenghi, 49–50. Ravenna.
- Bovini, Giuseppe. 1957. "Massimiano di Pola arcivescovo di Ravenna." *Felix Ravenna* 74: 5–27.
- Bovini, Giuseppe. 1990. *La cattedra eburnea del vescovo Massimiano di Ravenna*. Ravenna.
- Boyd, Susan A. and Mundell Mango, Marlia, eds. 1992. *Ecclesiastical Silver Plate in Sixth-Century Byzantium. Papers of the Symposium held May 16–18, 1986 at the Walter Art Gallery, Baltimore and Dumbarton Oaks, Washington DC*. Washington DC.
- Brandenburg, Hugo. 1987. "La scultura a Milano nel IV e V secolo." In *Il millennio ambrosiano*, edited by Carlo Bertelli, 80–129. Milano.
- Brown, Peter. 1992. *Power and Persuasion in Late Antiquity. Towards a Christian Empire*. Madison.
- Brown, Thomas. 1991. "Ebrei e Orientali a Ravenna." in *Storia di Ravenna*, II/1. *Dall'età bizantina all'età ottoniana. Territorio, economia e società*, edited by Antonio Carile, 135–149. Venezia.
- Bühl, Gudrun. 1999. "Elfenbeinkunst der Spätantike und aus Byzanz." In *Meisterwerke aus Elfenbein der Staatlichen Museen zu Berlin*, edited by Regine Marth, 21–26. Berlin.
- Bühl, Gudrun. 2000. "Dittico." In *Konstantinopel. Scultura Bizantina dai musei di Berlino (Museo Nazionale di Ravenna, Complesso Benedettino di S. Vitale, Ravenna, 15 Aprile-17 Settembre 2000)*, 76–77. Roma.
- Bühl, Gudrun. 2001. "Eastern or Western – that is the Question. Some Notes on the New Evidence concerning the Eastern Origin of the Halberstadt Diptych," *Acta ad Archaeologiam et Artium Historiam Pertinentia*, n.s. 15: 193–206.
- Bühl, Gudrun. 2002. "Il dittico d'avorio con Cristo e Maria conservato a Berlino e il vescovo ravennate Massimiano." *Ravenna Studi e Ricerche* 9: 81–97.
- Bühl, Gudrun. 2008. "The Making of Early Byzantine Pyxides." In *Spätantike und byzantinische Elfenbeinbildwerke im Diskurs*, edited by Gudrun Bühl, Anthony Cutler and Arne Effenberger, 9–16. Wiesbaden.
- Caillet, Jean-Pierre. 1986. "L'origine des derniers ivoires antiques." *Revue de l'Art* 72: 7–15.
- Caillet, Jean Pierre. 2008. "Remarques sur l'iconographie Christo-Mariale des grands diptyques d'ivoire du VIe siècle. Incidences éventuelles quant à leur datation et origine." In *Spätantike und byzantinische Elfenbeinbildwerke im Diskurs*, edited by Gudrun Bühl, Anthony Cutler and Arne Effenberger, 17–29. Wiesbaden.
- Cameron, Alan. 1998. "Consular diptychs in their social context: new eastern evidence." *Journal of Roman Archaeology* 11: 384–403.
- Carile, Maria Cristina. 2012. *The Vision of the Palace of the Byzantine Emperors as a Heavenly Jerusalem*. Spoleto.
- Carile, Maria Cristina. 2016. "Production, promotion and reception: the visual culture of Ravenna between late antiquity and the middle ages." In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 53–86. London.
- Carile, Maria Cristina and Cirelli, Enrico. 2015. "Architetture e decoro del complesso vescovile ariano: ipotesi ricostruttive e modelli di riferimento." In *Il patrimonio culturale tra conoscenza,*

- tutela e valorizzazione. Il caso della "Piazzetta degli Ariani" a Ravenna, edited by Giuseppe Grazia, Alessandro Iannucci and Mariangela Vandini, 97–127. Bologna.
- Casartelli Novelli, Silvana. 1996. *Segni e codici della figurazione altomedievale*. Spoleto.
- Cavallo, Guglielmo. 1992. "La cultura scritta a Ravenna tra antichità tarda e alto medioevo." In *Storia di Ravenna*, II/2. *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 79–125. Venezia.
- Cecchelli, Carlo. 1936–44. *La cattedra di Massimiano ed altri avori romano-orientali*, I–VII. Roma.
- Ceresa-Gastaldo, Aldo. 1968. "La tradizione Virgiliana nell'esegesi biblica di Cassiodoro." *Rivista di Studi Classici* 16: 304–309.
- Chrzanowski, Laurent. 2007. "Le vie dell'avorio." In *Eburnea Diptycha. I dittici d'avorio tra Antichità e Medioevo*, edited by Max David, 195–218. Bari.
- Ciampini, Giovanni. 1690–1699. *Vetera monimenta, in quibus praecipue musiva opera sacrarum, profanarumque aedium structura, ac, nonnulli antiqui ritus, dissertationibus, iconibusque illustrantur*. Roma.
- Cieri Via, Claudia. 1998. *Nei dettagli nascosto: per una storia del pensiero iconologico*. Roma.
- Cirelli, Enrico. 2007. "Ravenna e il commercio nell'adriatico in età tardoantica." In *Felix Ravenna. La croce, la spada, la vela: l'Alto Adriatico fra V e VI secolo*, edited by Andrea Augenti and Carlo Bertelli, 45–50. Milano.
- Cirelli, Enrico. 2014. "Typology and diffusion of amphorae in Ravenna and Classe between the 5th and the 8th centuries AD." In *LRCW 4 Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and archaeometry. The Mediterranean: A Market without Frontiers*, edited by Natalia Poulou-Papadimitriou, Eleni Nodarou and Vassilis Kilikoglou, 541–552. Oxford.
- Citti, Francesco and Ziosi, Anronio. 2007. "Diptycha ex ebore: osservazioni per uno studio lessicale." In *Eburnea Diptycha. I dittici eburnei tra Antichità e Medioevo*, edited by Max David, 45–71. Bari.
- Cosentino, Salvatore. 2008. *Storia dell'Italia bizantina (VI-XI secolo): da Giustiniano ai Normanni*. Bologna.
- Cosentino, Salvatore. 2016. "Il patrizio Germano e la famiglia imperiale nel VI secolo.", in: *Studi in onore di Maria Dora Spadaro*, ediyted by Tiziana Creazzo, Carmelo Crimi, Renata Gentile and Gioacchino Strano, 115–130. Acireale/Roma.
- Cumont, Franz. "L'adoration des Mages et l'art triomphal de Rome." *Memorie della Pontificia Accademia. Romana di Archeologia* 3: 82–105.
- Cutler, Anthony. 1985. *The Craft of Ivory. Sources, Techniques, and Uses in the Mediterranean World: A.D. 200–1400*. Washington DC.
- Cutler, Anthony. 1987. "Prolegomena to the craft of ivory carving in Late Antiquity and the Early Middle Ages." In *Artistes, Artisans et Production Artistique au Moyen-Age*, II. *Commande et Travail*, edited by Xavier Barral I Altet, 431–471. Paris.
- Cutler, Anthony. 1993. "Five Lessons in Late Roman Ivory." *Journal of Roman Archaeology* 6: 167–192.
- Cutler, Anthony. 1994. *The Hand of the Master: Craftsmanship, Ivory, and Society in Byzantium (9th-11th centuries)*. Princeton.
- Cutler, Anthony. 1998. *Late Antique and Byzantine Ivory Carving*. Aldershot/Brookfield.
- Cutler, Anthony. 2001. "The propriety of Peter: on the nature and authenticity of the Bryn Athyn apostle plaque." In *Mosaic. Festschrift A. H. S. Megaw*, edited by Judith Herrin, Margaret Mullet and Catherine Otten Froux, 27–32. London.
- Cutler, Anthony. 2007. "Il linguaggio visivo dei dittici eburnei. Forma, funzione, produzione, ricezione." In *Eburnea Diptycha. I dittici d'avorio tra Antichità e Medioevo*, edited by Max David, 131–161. Bari.

- Dauphin, Claudine. 1978. "Byzantine Pattern Books: A Re-examination of the Problem in the Light of the Inhabited Scroll." *Art History* 1.4: 400–423.
- De Francovich, Géza. 1975. "I primi sarcofagi cristiani di Ravenna." *CARB* 4.2: 17–46.
- De Marchi, Marina. 2006. "Leno: manufatti "bizantini" dalle aree cimiteriali di età longobarda." *Brixia Sacra* 11.2: 37–82.
- Degni, Paola. 2006. "Libri e scrittura." In *Santi, banchieri, re Ravenna e Classe nel VI secolo. San Severo e il tempio ritrovato*, edited by Andrea Augenti and Carlo Bertelli, 168–179. Milano.
- Deichmann, Friedrich. W. 1969. *Ravenna. Hauptstadt des spätantiken Abendlandes, I. Geschichte und Monumente*. Wiesbaden.
- Deichmann, Friedrich W. 1974. *Ravenna. Hauptstadt des spätantiken Abendlandes, II/1. Kommentar*. Wiesbaden.
- Deichmann, Friedrich W. 1976. *Ravenna. Hauptstadt des spätantiken Abendlandes, II/2. Kommentar*. Wiesbaden.
- Deichmann, Friedrich W. 1989. *Ravenna. Hauptstadt des spätantiken Abendlandes, II/3. Kommentar*. Stuttgart.
- Delbrueck, Richard. 1929. *Die Consulardiptychen und verwandte Denkmäler*. Berlin.
- Delmaire, Roland. 1989. *Largesses sacrées et res privata: l'aerarium impérial et son administration du IVe au VIe siècle*. Rome 1989.
- Demus, Otto. 1970. *Romanesque Mural Painting*. New York.
- Diemer, Dorothea. 1977. "Zum sogenannten Reliquiar der Heiligen Quiricus und Julitta in Ravenna." *Römische Quartalschrift für christliche Altertumskunde und Kirchengeschichte* 72: 32–43.
- Donderer, Michael. 2005. "Und es gab sie doch! Ein neuer Papyrus und das Zeugnis der Mosaiken belegen die Verwendung antiker Musterbücher." *Antike Welt*, 36.2: 59–68.
- Donderer, Michael. 2005–06. "Antike Musterbücher und (k)ein ende: ein neuer Papyrus und die aussage der Mosaiken." *Musiva et Sectilia* 2–3: 81–113.
- Dresken-Weiland, Jutta. 1998. *Repertorium der christlich-antiken Sarkophage, II. Italien mit einem Nachtrag Rom und Ostia, Dalmatien, Museen der Welt*. Mainz.
- Engemann, Josef. 1987. "Efenbeinfunde aus Abu Mena/Ägypten." *Jahrbuch für Antike und Christentum* 30: 176–182.
- Engemann, Josef. 1999. "Das spätantike Consulardiptychon in Halberstadt: westlich oder östlich?." *Jahrbuch für Antike und Christentum* 42: 158–168.
- Farioli, Raffaella. 1977. "I sarcofagi ravennati con segni cristologici: contributo per un completamento del Corpus II." *Felix Ravenna* 1–2: 133–159.
- Farioli, Raffaella. 1980. "Osservazioni sulla scultura del V-VI secolo: problemi ravennati." In *Passaggio dal mondo antico al Medio Evo: da Teodosio a San Gregorio Magno (Atti dei convegni Lincei, 45)*, 147–194. Roma.
- Farioli, Raffaella. 2005. "Per la datazione della Cattedra di Massimiano e dell'Ambone di Agnello." In *Studi in Memoria di Patrizia Angiolini Martinelli*, edited by Silvia Pasi, 165–168. Bologna.
- Farioli Campanati, Raffella. 1988. "L'arte giustiniana in Italia." In *Bisanzio, Roma e l'Italia nell'alto Medioevo (XXXIV Settima di Studio del Centro Italiano di Studi sull'Alto Medioevo)*, 23–51. Spoleto.
- Farioli Campanati, Raffaella. 1992. "Costantinopoli: aspetti topografico-monumentali iconografici." In *Storia di Ravenna, II/2. Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 127–157. Venezia.
- Farioli Campanati, Raffaella. 2000. "Cattedra d'avorio di Massimiano." In *Konstantinopel: scultura bizantina dai musei di Berlino (Museo nazionale di Ravenna, Complesso Benedettino di S. Vitale, Ravenna, 15 aprile–17 settembre 2000)*, 94–97. Roma.
- Fasoli, Gina. 1991. "Il patrimonio della Chiesa ravennate." In *Storia di Ravenna, II.1. Dall'età bizantina all'età ottoniana. Territorio, economia e società*, edited by Antonio Carile, 384–400. Venezia.

- Ferreri, Debora. 2009. "Sepulture e riti funerari a Classe: una lunga prospettiva diacronica." In *V Congresso Nazionale di Archeologia Medievale (Foggia-Manfredonia, 30 settembre-3 ottobre 2009)*, edited by Giuliano Volpe and Pasquale Favia, 459–564. Firenze.
- Ferreri, Debora. 2011. "Spazi cimiteriali, pratiche funerarie e identità nella città di Classe." *Archeologia Medievale* 38: 59–74.
- Frantová, Zuzana. 2014. *Hereze a loajalita: slonovinový Diptych z pěti částí z pokladu katedrály v Miláně / Heresy and loyalty: the ivory diptych of five parts from the Cathedral Treasury in Milan*. Brno.
- Furlan, Italo. 1960. "Osservazioni sull'iconografia del dittico di Murano." *Felix Ravenna* 82: 142–151.
- Gabelmann, Hanns. 1973. *Die Werkstattgruppen der oberitalischen Sarkophage*. Bonn.
- Gaborit-Chopin, Danielle. 1992. "Les ivoires du Ve au VIII^e siècle." In *Byzance: l'art byzantin dans les collections publiques françaises (Musée du Louvre, 3 novembre 1992-1er février 1993)*, 42–45. Paris.
- Gagetti, Elisabetta. 2007. "Dittico del Patrizio." In *La Rivoluzione dell'immagine. Arte paleocristiana tra Roma e Bisanzio*, edited by Fabrizio Bisconti and Giovanni Gentili, 216–219. Cinisello Balsamo/Torino.
- Gerola, Giuseppe. 1915. "Il monogramma della cattedra eburnea di Ravenna." *Felix Ravenna* 19: 807–813.
- Gillet, Andrew. 2001. "Rome, Ravenna and the last western emperors." *Papers of the British School at Rome* 69: 131–167.
- Gómez Moreno, Carmen. 1968. *Medieval Art from Private Collections. A Special Exhibition at the Cloisters*. New York.
- Grah, Ivan. 2005. "Rapporti ecclesiastici fra l'Istria e Ravenna durante la vita dell'arcivescovo Massimiano e nei secoli successivi." In *La Chiesa metropolitana ravennate e i suoi rapporti con la costa adriatica orientale*, edited by Maurizio Tagliaferri, 49–60. Bologna.
- Griffing, Robert. P. 1938. "An Early Christian Ivory Plaque in Cyprus and Notes on the Asiatic Ampullae." *The Art Bulletin* 20.3: 266–279.
- Guérin, Sarah M. 2013. "Forgotten Routes? Italy, Ifrīqiya and the Trans-Saharan Ivory Trade." *Al-Masaq* 25.1: 70–91.
- Hellemo, Geir. 1996. *Adventus Domini. Eschatological Thought in 4th century Apses and Catecheses*. Leiden/Boston.
- Ioli, Marco. 1971. *Il sarcofago paleocristiano di Catervio nel Duomo di Tolentino*. Bologna.
- Jäggi, Carola. 2013. *Ravenna. Kunst und Kultur einer spätantiken Residenzstadt*. Regensburg.
- Kazanski, Michael and Périn, Patrick. 2000. *L'or des princes barbares: du Caucase à la Gaule Vème siècle après J.-C.* Paris/Manheim.
- Kazanski, Michael and Périn, Patrick. 2007. *La tombe de Childéric, le Danube et la Méditerranée. In Villes et campagnes en Neustrie. Société – Économie – Territoires – Christianisation. Actes des XXV Journées Internationales d'Archéologie Mérovingienne (Tournai, 17–20 juin 2004)* Edited by Laurent Verslype, 29–38. Montagnac.
- Kitzinger, Ernst. 1972. "The Role of Miniature Painting in Mural Decoration." In *The Place of Book Illumination in Byzantine Art*, edited by Kurt Weitzmann, 99–142. Princeton.
- Koch, Guntram. 2000. *Frühchristliche Sarkophage*. München.
- Kollwitz, Johannes and Herdejürgen, Helga. 1979. *Die ravennatistischen Sarkophage (Die Sarkophage der westlichen Gebiete des Imperium Romanum, 8.2)*. Berlin.
- Labarte, Jules. 1864–66. *Histoire des arts industriels au Moyen Âge et à l'époque de la Renaissance*. Paris.
- Lawrence, Marion. 1970. *The Sarcophagi of Ravenna*. Roma.

- Maioli, Maria Grazia. 1990. "Classe: la cultura materiale." In *Storia di Ravenna*, I. *L'evo antico*, edited by Giancarlo Susini, 415–455. Venezia.
- Maioli, Maria Grazia. 1991. "Strutture economico-commerciali e impianti produttivi." In *Storia di Ravenna*, II/1. *Dall'età bizantina all'età ottoniana. Territorio Economia e Società*, edited by Antonio Carile, 223–247. Venezia.
- Martini, Luciana and Rizzardi, Clementina. 1990. *Avori bizantini e medievali nel Museo Nazionale di Ravenna*. Ravenna.
- Mauskopf Deliyannis, Deborah. 2010. *Ravenna in Late Antiquity*. Cambridge.
- Mauskopf Deliyannis, Deborah. 2016. "Episcopal Commemoration in Late Fifth-century Ravenna." In *Ravenna: its Role in Earlier Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 39–52. London.
- Mazzotti, Mario. 1953. "Il sarcofago di S. Ecclesio nella basilica di S. Vitale." *Felix Ravenna* 62: 38–47.
- Mazzotti, Mario. 1954. "Appunti per la storia della cattedra eburnea di Ravenna." *Studi Romagnoli* 5: 483–492.
- Mazzotti, Mario. 1956. "L'attività edilizia di Massimiano di Pola." *Felix Ravenna* 71: 5–30.
- Melucco Vaccaro, Alessandra. 2003. "Hierosolimam adiit [. . .] tabulas eburneas optimas secum deportavit." *Arte Medievale* 7.2: 1–19.
- Montanari, Giovanni. 1984–85. "Giuseppe l'Ebreo della cattedra di Massimiano: prototipo del Buon Governo?." *Felix Ravenna* 127–130: 305–322.
- Montanari, Giovanni. 1991. "Massimiano Arcivescovo di Ravenna (546–556) come committente." *Studi Romagnoli* 42: 368–416.
- Nestori, Aldo. 1966. *Il mausoleo e il sarcofago di Flavius Iulius Catervius a Tolentino*. Città del Vaticano.
- Netzer, Nancy. 1983. "Redating the consular ivory of Orestes." *Burlington Magazine* 125: 265–271.
- Nikolajević, Ivanka. 1989. "Un San Pietro inconsueto. La placca d'avorio della Glencairn Foundation, Bryn Athin (Penn.)." In *Studi in memoria di Giuseppe Bovini*, II, 429–441. Ravenna.
- Noga-Banai, Galit. 2008. *The Trophies of the Martyrs: an Art Historical Study of Early Christian Silver Reliquaries*. New York.
- Novara, Paola. 1991. "Materiale scultoreo: Cosiddetta capsella dei SS. Quirico e Giulitta." In *Tesori nascosti. Momenti di storia e di arte nelle antiche chiese di Romagna*, edited by Francesco Faranda, 117–118. Milano.
- Olch Stern, Wilma and Hadjilazaro Thiemme, Danae. 2007. *Kenchreai, Eastern port of Corinth*, VI. *Ivory, Bone, and Related Woods Finds*. Leiden/Boston.
- Olivieri Farioli, Raffaella. 1969. *Corpus della scultura paleocristiana, bizantina ed altomedioevale di Ravenna*, III. *La scultura architettonica: basi, capitelli, pietre d'imposta, pilastri e pilastrini, plutei, pulvini*. Roma.
- Olovdotter, Cecilia. 2005. *The Consular Image: An Iconological Study of the Consular Diptychs*. Oxford.
- Olovdotter, Cecilia. 2012. "Anastasius' I consuls: ordinary consulship and imperial power in the consular diptychs from Constantinople." *Valör. Konstvetenskapliga Studier* 1–2: 33–47.
- Orselli, Alba Maria. 1992. "La Chiesa di Ravenna tra coscienza della istituzione e tradizione cittadina." In *Storia di Ravenna*, II/2. *Dall'età bizantina all'età ottoniana. Ecclesiologia, cultura e arte*, edited by Antonio Carile, 405–422. Venezia.
- Patterson Ševčenko, Nancy. 1977. "Plaque with Saint Peter." In *Age of Spirituality. Late Antique and Early Christian Art (3rd to 7th century)*, edited by Kurt Weitzmann, 539–540. New York.
- Penni Iacco, Emanuela. 2011. *L'arianesimo nei mosaici di Ravenna*. Ravenna.

- Peschlow, Urs. 2011. "Luxusgüter der Spätantike. Skizzen zu Kenntnisstand und Problemen der Elfenbeinforschung." In *Elfenbein und Archäologie. Incentius-Tagungsbeiträge 2004–2007*, edited by Arun Banerjee and Christian Eckmann, 75–89. Mainz 2011.
- Pietri, Charles. 1991. "Aristocrazia e clero al tempo di Odoacre e Teoderico." In *Storia di Ravenna*, II/1. *Dall'età bizantina all'età ottoniana. Territorio, economia e società*, edited by Antonio Carile, 287–310. Venezia.
- Ricci, Corrado. 1898. "Avori di Ravenna." *Arte Italiana Decorativa e Industriale* 7. 5–6: 1–4.
- Rizzardi, Clementina. 1985. "La pisside eburnea del tesoro della Cattedrale di Pesaro." In *Atti del VI Congresso Nazionale di Archeologia Cristiana*, 609–620. Ancona.
- Rizzardi, Clementina. 1994. "Il Dittico di Murano conservato nel Museo Nazionale di Ravenna: aspetti e problematiche." In *Historiam pictura refert: miscellanea in onore di padre Alejandro Recio Veganzones*, 486–496. Città del Vaticano.
- Rizzardi, Clementina. 1997. "Ambulacro. Seconda campata. Sarcofago di Isacio (secondo decennio del V secolo)." In *La basilica di San Vitale a Ravenna*, edited by Patrizia Angiolini Martinelli, 177–178. Modena.
- Rodziewicz, Elzbieta. 2009. "Ivory, bone, glass and other production at Alexandria, 5th-9th centuries." In *Byzantine Trade, 4th-12th centuries. Archaeology of Local, Regional and International Exchange*, edited by Marlia Mundell Mango, 83–96. Aldershot.
- Russel, Ben. 2013. *The Economics of the Roman Stone Trade*. Oxford.
- Russo, Eugenio. 1974. "Studi sulla scultura paleocristiana e altomedievale", *Studi Medievali* 15.1: 25–142.
- Russo, Eugenio. 1989. "Testimonianze monumentali di Pesaro dal VI secolo all'epoca romanica." In *Pesaro tra Medioevo e Rinascimento*, edited by Scevola Mariotti, 79–147. Venezia.
- Russo, Eugenio. 1991. *Sculture del complesso eufrasiano di Parenzo*. Napoli.
- Russo, Eugenio. 2003. *L'architettura di Ravenna paleocristiana*. Venezia.
- Scheller, Robert W. 1963. *A Survey of Medieval Model Books*. Haarlem.
- Scheller, Robert W. 1995. *Exemplum. Model-Book Drawings and the Practice of Artistic Transmission (ca. 900–ca. 1470)*. Amsterdam.
- Sena Chiesa, Gemma. 1990. "Argenti e avori." In *Milano capitale dell'Impero Romano 286–402 d.C. Catalogo della Mostra (Milano, Palazzo Reale 24 gennaio – 22 aprile 1990)*, 335–338. Milano.
- Sena Chiesa, Gemma. 2005. "Le arti sontuarie: riflessioni su metodi di indagine e problemi aperti." In *Costantino il Grande: la civiltà antica al bivio tra Occidente e Oriente*, edited by Angela Donati and Giovanni Gentili, 188–201. Cinisello Balsamo.
- Settis, Salvatore 2006. "Il Papiro di Artemidoro: un libro di bottega e la storia dell'arte antica." In *Le tre vite del Papiro di Artemidoro: voci e sguardi dall'Egitto greco-romano*, edited by Salvatore Settis and Claudio Galazzi, 20–65. Milano.
- Shalem, Avinoam. 2004. *The Oliphant: Islamic Objects in Historical Context*. Leiden/Boston.
- Solin, Hekkin. 1995. "Die Inschrift des Berliner Christus-Maria-Diptychons." In *Römische Inschriften – Neufunde, Neulesungen und Neuinterpretationen. Festschrift für Hans Lieb*, edited by Regula Frei Stolba and Michael A. Speidel, 357–370. Basel.
- Spieser, Jean-Michel. 2015. *Images du Christ: des catacombes aux lendemains de l'iconoclasme*. Genève.
- St. Clair, Archer. 2003. *Carving as Craft: Palatine East and the Graeco-Roman Bone and Ivory Carving*. Baltimore/London.
- Stauffer, Annemarie. 2008. *Antike Musterblätter. Wirkkartons aus dem spätantiken und frühbyzantinischen Ägypten*. Wiesbaden.
- Stuhlfauth, Georg. 1896. *Die altchristliche Elfenbeinplastik*. Freiburg.
- Testini, Pasquale. 1977. "Su una discussa figurazione del sarcofago detto del profeta Eliseo o Pignatta." *Felix Ravenna* 113–114: 321–337.

- Valenti Zucchini, Giselda and Bucci, Mileda. 1968. *Corpus della scultura paleocristiana, bizantina ed altomedioevale di Ravenna*, II. *I sarcofagi a figure e a carattere simbolico*. Roma.
- Volbach, Wolfgang F. 1976. *Elfenbeinarbeiten der spätantike und des frühen mittelalters*. Mainz.
- Volbach, Wolfgang. F. 1977. *Avori di scuola ravennate nel V e VI secolo*. Ravenna.
- Von Barga, Friederike. 1994. "Zur Materialkunde und Form spätantiker Elfenbeinpyxiden." *Jahrbuch für Antike und Christentum* 37: 45–63.
- Wessel, Klaus. 1948–49. "Eine Gruppe oberitalienischer Elfenbeinarbeiten." *Jahrbuch des Deutschen Archäologischen Instituts* 63–64: 119–160.
- Wessel, Klaus. 1952–53. "Studien zur oströmischen Elfenbeinskulptur." In *Wissenschaftliche Zeitschrift der Universität Greifswald Gesellschafts und sprachwissenschaftliche Reihe*. 2: 63–94. Greifswald.
- Wessel, Klaus. 1953–54. "Studien zur oströmischen Elfenbeinskulptur." In *Wissenschaftliche Zeitschrift der Universität Greifswald Gesellschafts und sprachwissenschaftliche Reihe*. 3: 1–30. Greifswald.
- Wessel, Klaus. 1958. "Il dittico di Murano dalle cinque parti e la sua cerchia." *CARB* 1: 11–127.
- Williamson, Paul. 2010. *Medieval Ivory Carvings. Early Christian to Romanesque*. London.
- Zangara, Vincenza. 2000. "Una predicazione alla presenza dei principi: la Chiesa di Ravenna nella prima metà del sec. V." *Antiquité Tardive* 8: 265–304.

Enrico Cirelli

6 Bricks for Ravenna: Materials and the Construction of a Late Antique Imperial Residence

Abstract: The construction of the new imperial residence of Ravenna was quite completely made with reused materials, *spolia* and bricks such as many other Roman tradition cities and settlements since the second half of the 3rd century. This Late Roman architecture continued to follow the same ‘imperial’ construction techniques. Reuse of material was totally logical and practical, and was not due to an economic crisis, cultural change or loss of knowledge as I will try to demonstrate in this paper. Roofing tiles, *tegulae* and *imbrices* but also clay vaulting tubes, were produced without interruption also during the early Middle ages throughout Italy. I will also try to demonstrate that there is even evidence in Ravenna of production of new bricks at the beginnings of the 5th century and in the first quarter of the 6th century. This is already well known for the main churches built during the Ostrogothic reign in Ravenna, with San Vitale, Sant’Apollinare in Classe and San Michele *in Africisco*, later dedicated under the Byzantine rule and completely realized with new ‘manubriati’ bricks, following the Roman tradition.

Introduction

Since the second half of the 3rd century and more widespread in the 4th century, most of the public and religious building in Italy were built with reused materials, *spolia* and bricks: the arch of Constantine\Maxentius in Rome and the famously large Constantinian basilicas of St. John Lateran and St. Peter in the Vatican.¹ This late Roman architecture continued to follow the same ‘imperial’ construction techniques. Reuse of material was totally logical and practical, and was not due to an economic crisis, cultural change or loss of knowledge. Roofing tiles (*tegulae* and *imbrices*) were, for instance, produced without interruption even during the early Middle Ages throughout Italy.² In this paper, I will demonstrate that there is even evidence in Ravenna of production of new bricks at the beginnings of the 5th century and in the first quarter of the 6th century. Large use of reused bricks is also

¹ Deichmann 1976, 131–146. For a new perspective about Constantine’s architectural program, see: Guidobaldi 2016, 461–492. I wish to thank J. Riley Snyder, Debora Ferreri and Maria Cristina Carile for the suggestions and notice reading this paper. I also want to thank Riley for overhauling the English text.

² Deichmann 1975; Righini 1991, 193–221; Negro Ponzi 2000.

testified inside defensive city walls, built during the 3rd century at Rome,³ Rimini,⁴ Milan,⁵ Verona⁶ and Aquileia,⁷ or later in Como,⁸ Mantova,⁹ Parma,¹⁰ Bologna,¹¹ Classe¹² and finally Ravenna.¹³

During this period the northern Italian cities were already deep into crisis.¹⁴ Following Ambrose, bishop of Milan (AD 374–397), Italian cities seemed dead bodies, as they were mostly destroyed.¹⁵ In the light of what is actually known, the archaeology of the city of Ravenna describes the same evidence as the one described by Ambrose. Both for private and public construction, the archaeological evidence indicates numerous layers of burning and destruction of the ancient Roman buildings. These events date from the late 3rd and early 4th centuries. Evidence of this phenomenon has been identified at excavations inside the ancient city walls such as the *domus* at 'Orti Bacinetti' (destroyed during the 3rd c.), in 'Banca Popolare' *domus* (beginnings of the 4th c.) which was replaced at the beginnings of the 5th century by the Episcopal baths, in via Ercolana *domus*, under the foundations of the church of St. Andrew,¹⁶ and inside the two different via D'Azeglio *domus* (4th c.); at Largo Firenze' *domus* (end of the 3rd c.), inside the *domus* identified under the churches of San Vitale and the Santa Croce (end of the 3rd c.) and inside another Roman house identified during the excavations of one of the late antique city walls *posterula* (*Posterula Ovilionis?*). Most of these private houses were first recovered by temporary construction and after their destruction and abandonment during the 4th century and were replaced by monumental buildings at the beginnings of the 5th century (Table 1).

The same framework is offered by other cities in this region, where fires and devastation are often associated with Alemanni and Jutungi incursions, destroying

3 Coates Stephens/Parisi 1999; Meneghini/Santangeli Valenzani 2004, 55–57; Medri 2015.

4 Mansuelli 1941, 57–61; Negrelli 2008.

5 Sannazaro 2014, 82.

6 Cavaliere Manasse 1987, 46.

7 Bertacchi 1986, 111.

8 Lusuardi Siena 1984.

9 Tamassia 1993.

10 Dall'Aglia 1999.

11 Curina 1997.

12 Lepore/Montevecchi 2009.

13 Righini 1991 and later Gelichi 2005, observed that for the construction of the city walls of Ravenna must have been reuse a huge quantity of bricks. See also Christie/Gibson 1988, with a preliminary study where they proposed the use of new bricks, even if different in dimensions and fabrics.

14 Augenti 2001; Augenti 2006a; 2014.

15 Ambr., *Epist.*, 39, 3: "*semirutarum urbium cadavera*". See: Cracco Ruggini, Cracco 1977, 448–475; Delogu 1990, 146.

16 See: Cirelli 2008, for previous bibliography.

Table 1: Private buildings: Roman *domus* in late antique Ravenna.

Site	Destruction\ burn	Downgrading\ transformation	Abandon	Reconstruction
via D'Azeglio's <i>Domus</i>	3rd c.	3rd–5th c.	no	Aristocratic <i>Domus</i> created merging two smaller Roman <i>domus</i> (5th–7th c.)
Orti Baccinetti <i>Domus</i>	3rd c.	3rd c.	3rd c.	
via Ercolana <i>Domus</i>		4th–5th c.		<i>domus</i> replaced by a basilica (5th c.)
Banca Popolare <i>Domus</i>	4th c.			<i>domus</i> replaced by Bishops Palace' Bath (5th c.)
<i>Domus</i> under S. Vitalis	3rd c.		3rd c.	<i>Sacellum</i> (5th c.); basilica (6th c.)
Santa Croce <i>Domus</i>	3rd c.		3rd c.	Church of Santa Croce (5th c.)
Roman House	2nd c.	3rd–5th c. (cemeterial zone)	2nd c.	City walls (5th c.)
Largo Firenze <i>Domus</i>	3rd c.		3rd c.	New late antique house (5th c.)
via Guaccimanni <i>Domus</i>		4th–5th rooms decay and wear		New public building (6th c.)
Via Diaz <i>Domus</i>				<i>Moneta Aurea</i> (6th c.)
Via di Roma's house				Imperial Palace

wide sectors of the Emilia Romagna towns.¹⁷ Destructive events are recorded in cities like Rimini (e.g. Piazza Ferrari and Palazzo Diotallevi *domus*¹⁸) as well as at Sarsina inside via Roma and via Finamore *domus*.¹⁹

The destroyed buildings are often abandoned or re-occupied by very small structures. Vast areas of the settlements, once flourishing, begin in this way to appear as piles of rubble and construction debris. Uninhabited areas start to be occupied by green spaces. In sectors where there are no traces of destruction, one can

¹⁷ Ortalli 1992, 584–585; 2003, 98–99.

¹⁸ Riccioni 1969, 313; Gentili 1979, 49; Maioli 1984, 461; Ortalli 1992, 584; 2000a, 518; 2000b, 176.

¹⁹ Gentili et al. 1967, 28, 56; Ortalli 1992, 573; 1997, 138, 153.

also observe a strong degree of deterioration and downgrading. Spaces previously paved with mosaic began to be covered with dirt floors, and frequent small fires are lit within formerly-luxurious convivial environments and representative rooms.²⁰ This is the case for instance for via Testoni *domus* in Bologna.²¹ Within the same *domus* a mosaic paved room is gradually replaced with a smaller room covered with wooden planks and used as a granary.

Inside the Roman city of Sarsina, moreover, the residential area of an ancient *domus* was transformed during the 4th century into a metal workshop with a small kiln for melting bronze.²² There is probably a new conception of domestic spaces, as is the case of sectors of the house or rooms transformed into working areas and as it was noticed in the new plan metric joints obtained through the use of new wood or clay partitions, or with walls built with mixed materials.²³ In “Boxers” *domus*, one of the two different houses discovered during Via D’Azeglio excavation, the monumental entrance of the late antique building was transformed into a sort of garage for one chariot, that left two parallels grooves inside the ancient (1st c.) mosaic pavement that apparently changed use.²⁴ Other large *domus* sectors are also buried and filled with earth and later converted into cultivated areas, in home gardens for instance. This is seen in the case of ‘Palazzo Massani’ in Rimini, where in the 4th century a *domus* with peristyle atrium was largely shaved and covered with agricultural land to achieve a vegetable garden for the use of new dwelling that re-occupied some rooms of the ancient building, spared by the transformation.²⁵

From the 4th century, a process began of degradation of the residential buildings and processing and downgrading of entire urban sectors. The reduction of the areas occupied by domestic plants, largely dependent on general demographic crisis, caused a considerable depletion of the structure of the urban blocks, and in some cases the abandonment of entire districts in every cities of the region. During the 5th and 6th centuries this phenomenon is most prevalent in the western regions of north Italy, and especially Emilia: Piacenza,²⁶ *Veleia*,²⁷ Fidenza,²⁸ Parma,²⁹ Reggio

²⁰ For a review of late antique houses, see: Baldini Lippolis 2001.

²¹ Ortalli 2003, 99.

²² Ortalli 1997, 141, 150.

²³ Augenti 2004.

²⁴ Montevocchi/Leoni 2004, 43.

²⁵ Ortalli 2001, 28.

²⁶ Marini Calvani 1990, 782.

²⁷ Marini Calvani 1975.

²⁸ Catarsi Dall’Aglio/Dall’Aglio 1991–1992, 12, 16, 22.

²⁹ Catarsi Dall’Aglio 1998, 607–609.

Emilia,³⁰ Modena,³¹ Bologna,³² Claterna,³³ *Forum Cornelii*³⁴ and Sarsina³⁵ display within them little evidence of buildings positively dated to these two crucial centuries to verify the transformations of urban settlements in Late Antiquity. Even in Ravenna this begins between the late 3rd and early 4th centuries: the phenomenon of town ruralization characterized all Mediterranean and northern European cities, especially the most decentralized settlements and far from the primary imperial centers of the Late Antiquity.³⁶ The reasons for this transformation are often seen in the context of the political and institutional crisis due to frequent raids of Germanic tribes (e. g. Alamanni and Jutungi) from the middle of the 3rd century.³⁷ The destruction and burning of some *domus* in Ravenna have been directly attributed to these kinds of raids,³⁸ although these catastrophic hypotheses are not convincing. War, especially so sporadic, are rarely cause for abandonment of inhabited areas in economically active society. The phenomenon is related rather to the inability of urban societies to renew them and regain possession of the devastated areas by these traumatic events.

The transformation of Ravenna in imperial residence reversed this trend, which had an echo more widespread in the other cities of Romagna and inside the organization of the territories under its administration.³⁹ As for public buildings the investment of the urban and imperial aristocracy in this period of structural crisis is even more modest. Only in Ravenna (within the territory of the modern Emilia Romagna) stands a public commitment in these later centuries, thanks to the elevation of the city to the rank of imperial seat in the 5th century.⁴⁰

Unlike Ravenna, the private residences of the rich cities of western Emilia are never transformed into aristocratic buildings or public structures. The crisis affecting the other cities of the region is more incisive. In these settlements, even including the 5th and 6th centuries, private investment lacked and the deconstruction process did not stop following the conquest of Justinian and the exarchate birth in the eastern part of the region. These investments would be absent until at least half of the 7th century in the West when occupied by the Lombards. Only with rare urban renewal in the mid-seventh century some urban settlements began to rise

³⁰ Gelichi 1998, 11–16; Scagliarini Corlàita/Venturi 1999, 19, 33, 39.

³¹ Gelichi/Malnati 1986, 552; Giordani 2000, 432.

³² Zuffa 1944; Bergonzoni/Bonora 1976; Ortalli 1996.

³³ Bollini 1985.

³⁴ Mancini/Mansuelli/Susini 1957, 185.

³⁵ Mansuelli 1954; Gentili et al. 1967, 27, 56; Ortalli 1997.

³⁶ Cosentino 2016; Zanini 2016.

³⁷ Ortalli 1992, 557–563.

³⁸ Manzelli 2000, 236.

³⁹ Ortalli 2003, 115; Cirelli 2015, 14.

⁴⁰ Gelichi 2000; Lippolis 2000, 114.

again, as evidenced by the case of Modena⁴¹ and other northern Italian cities, thanks to new élite investments.⁴²

From this moment and with particular importance from the late 5th to the mid-6th centuries during the Ostrogothic administration, Ravenna becomes one of the only European cities of the 'barbarian kingdoms', along with Toledo and *Ticinum*, trying to imitate a capital-model hardly imitable: Constantinople.⁴³

Materials for the Construction of an Imperial Residence

Apart from the extraordinary use of marble and stone, the skeleton of the massive construction site of Ravenna was made of bricks. That is easily visible throughout most of the late antique monuments still preserved inside and outside the city walls. This is a totally different point of view standing against the original perspective when every façade was covered by plaster followings Roman construction rules.⁴⁴ It definitely means that no one really cared about dimensions and height of these materials except for what was linked to static but not aesthetic reasons. Most of the reused bricks were fragments of the original rectangular 'sesquipedale cisalpino' (45x30x6 cm)⁴⁵; different from other Roman regions where the square shape (44–45 x 5–8 cm) is more common.⁴⁶ From the main 'cisalpino' type, there were normally various subdivisions, such as the 'mezzo sesquipedale' (45x16x6 cm) and the 'bessale' 22x22x5 cm, used inside bath for *suspensurae*, but also frequently reused inside structures.

The chronology of production of this type of bricks is normally helped by stamps, which occurred mainly until the age of Severus Alexander (AD 222–235).⁴⁷ The most famous stamped bricks found in Ravenna's excavations come from *Pansiana* kilns, whose production has been identified all along the Adriatic coasts, from *Picenum* to Dalmatia since the end of the 1st century BC to Vespasian age (AD 69–79).⁴⁸ The major number of finds is instead produced during the reign of Emperors Hadrian (AD 117–138) and Antoninus Pius (AD 136–161) and these bricks were later largely reused inside the late antique warehouse at Classe and in structures of the medieval monastery of San Severo (Fig. 1).⁴⁹

⁴¹ Gelichi 1989; 2001, 231.

⁴² Delogu 1980, 68–75; Cirelli 2013a, 132.

⁴³ Brühl 1967, 215; Brogiolo 2000, 135.

⁴⁴ Carile/Cirelli 2015, 104.

⁴⁵ Novara 2000, 118.

⁴⁶ Vernia 2005, 1110.

⁴⁷ Righini 2008, 15.

⁴⁸ Matijašić 1983, 961–995.

⁴⁹ Augenti 2010; Augenti/Cirelli 2016.

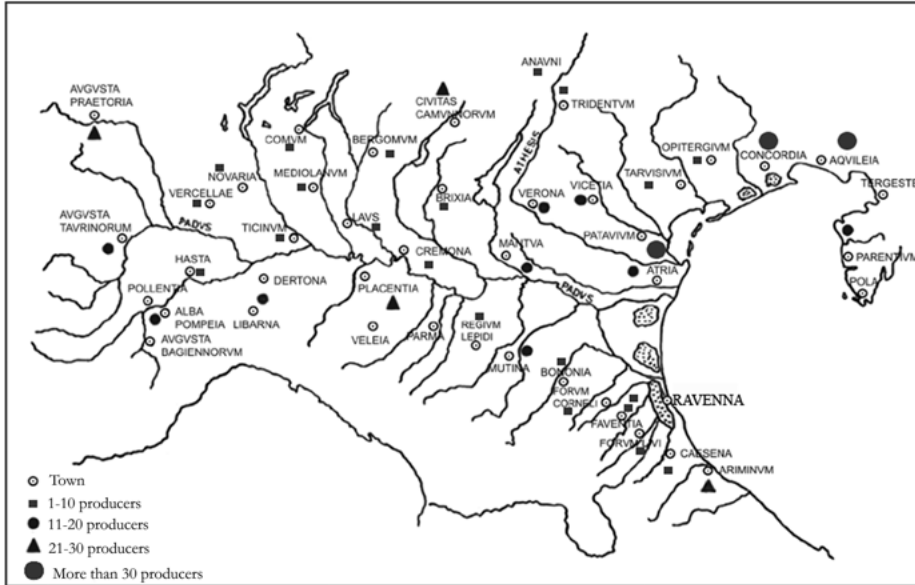


Fig. 1: Distribution map of Roman and late antique kilns in northern Italy (after Righini 2010).

Table 2: Bricks with imperial stamped names identified in Ravenna's territory.

Emperor's stamp	Bricks	Tegulae
Hadrian (AD 123–138)	45	4
Antoninus Pius (AD 138–161)	85	1
Commodus (AD 161–192)	39	3
Septimius Severus, Caracalla and Geta (AD 193–211)	25	
Severus Alexander (AD 222–235)	4	
Martialis 3rd c.	1	

Table 3: Private stamped bricks and roofing tiles from Ravenna's territory.

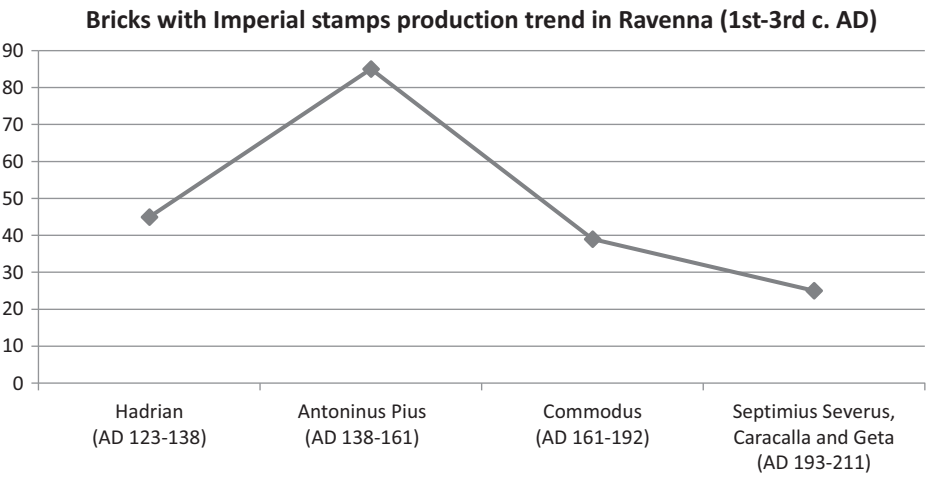
Stamp	Brick	Tegula	Site
CARTORIANA	1?		Ravenna
	1?		Classe
CARTORIAN	2		Ravenna
	2		Classe
CINNIANA	1	1	Classe
		1	Bagnacavallo Lugo

Table 3 (continued)

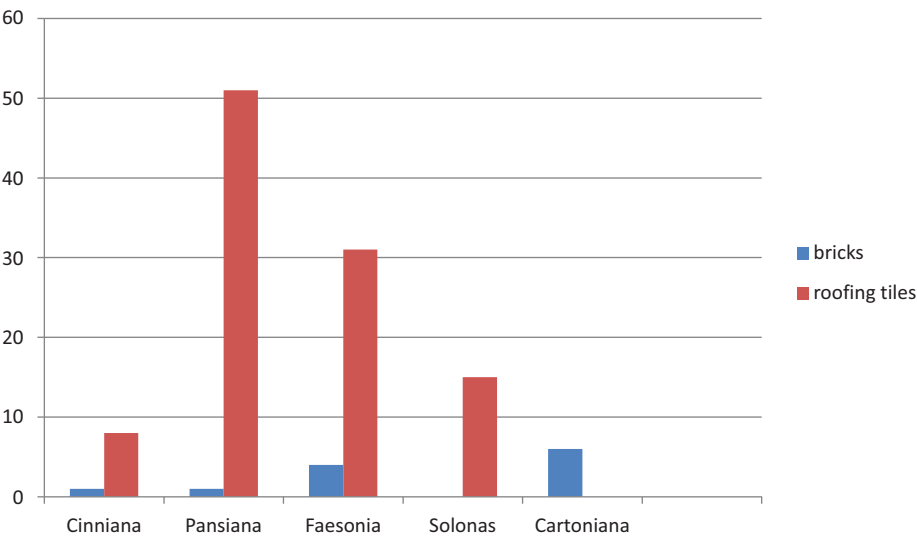
Stamp	Brick	Tegula	Site
CINNIANA.C.I.P.		1 1?	Ravenna? Ravenna
CINNIANA.IVL.PRI		2 1 1	Ravenna Classe Lugo
FAESONIA		3 1	Ravenna Classe
A.FAESONI.A.F.	2 2	16 3 1 6	Ravenna Classe Faenza Lugo
C.TVLLI.ATISIANI.F/FAESONIA		1	Classe
PANSIANA		23 3	Ravenna Classe
TI.PANSIANA		8 1	Ravenna Classe
T PASIANA		1	Faenza
C.PANSIANA		1	Bagnacavallo
C.PASI.A.NA		1	Ravenna
C.CAESAR[–]		1	Ravenna
TI.CLAVDI[PANSI]		1	Ravenna
NER.CAES.PANS		1	Classe
NERONIS.CLA.PAN		2 1	Ravenna Classe
NER.CLAVDI-PANSIANA		1	Ravenna
NER.CLAVDI-PANSI		3 1	Ravenna Classe
NER.CLAVD PANSIAN		1 1	Ravenna Classe
IMP • (small circle) CL S (inverted) P Λ	1		Ravenna
SOLONAS		4 5	Ravenna Classe
SOLONAS CIPRO		2	Ravenna

Table 3 (continued)

Stamp	Brick	Tegula	Site
[SOLO] NAT		1	Classe
L FRENI CF SOL		2	Ravenna
M FVLC CLEMENTIS / SOLONAS DE PLAVTI		1	Classe



Graph 1: Bricks with Imperial stamps production trend in Ravenna.



Graph 2: Histogram of the main *figlinae* brickstamps identified in Ravenna and Classe.

From this list, we have in Ravenna and its territory mostly *tegulae* from *Cinniana* (8 stamps), *Faesonia* (31 stamps), *Pansiana* (51) and *Solonas* (15) *figlinae* (Table 3 – graph. 2). Stamped bricks are much rarer and come from great estates at *Cartoriana* (6), *Faesonia* (4), *Pansiana* (1), and *Cinniana* (1).⁵⁰ They are typically thought to be produced in the area around the Po Delta, and in the territory north of Ravenna, but information about kilns have yet to be completely published.⁵¹ Most of these ‘private’ *figlinae* were specialized in the production of *tegulae*, while in the 2nd century we find ‘imperial stamps’ particularly over bricks (Table 3 – graph.1). The quantities show a top standard of production during Antoninus Pius’ administration and diminishing during the first half of the 3rd century. Other smaller private kilns have (Table 4) been identified in Ravenna’s territory, standing to their diffusion and brick production linked to the numerous *villae* identified all throughout the surrounding landscape.⁵²

Table 4: ‘Minor’ private kilns.

Stamp	Brick	Tegula	Site
CN AVIL	1?		Ravenna
C CEIONI MAXI		1	Ravenna
		1	S. Zaccaria
T COELI	1		Ravenna
C CRITONI CN	2		Classe
L EGNATII SOR		1	Ravenna
CN FAVSTI	1?		Ravenna
L FREN	1		Lugo
C IVL THIASI EROTI	1		Ravenna
	2?		Villa di Russi
	2		Cotignola
C IVL THIASI GALLICAN	1		Ravenna
Q LEI[–] / AMA[–]	1?		Ravenna
C M S		2	Faenza
MACEDO	1		Ravenna

⁵⁰ Pellicioni 2010, 19.

⁵¹ Righini/Biordi/Pellicioni 1993, 33–34.

⁵² See previous bibliography in Cirelli 2014, 343–344.

Table 4 (continued)

Stamp	Brick	Tegula	Site
IL MONTANI		1 1?	S. Pietro in Campiano S. Zaccaria
Q P C	1		Classe
PASAE		1 1	Faenza Riolo Terme
LVC I QVAN	1		Lugo
Q RVSTICELI / AMERYMNI	1?		Ravenna
[–] SABINI		1	Classe
C SAF AGRIC	1?		Ravenna
MVSZ	1		Ravenna
SEVIAE	1?		Ravenna
SPVRENNI		6	Lugo
Q T P	3		Ravenna
[–] ARVITA		1 1?	Ravenna Faenza
[–] AVC [–]		1	Faenza
C MAV	1?		Cotignola
[–] IRS [–]		1	S. Pietro in Campiano
[–] NONI	1?		Ravenna
[–] OL PROSI [–]		1	S. Zaccaria
PAET [–]		1	Faenza

In Ravenna's territory, the existence of a late Roman bricks production has been uncovered with inscribed stamps using the name of SANTERNI ARMENTARIA (bricks, Fig. 2.1) and QVIRICVS (typically stamped on *tegulae*, Fig. 3.3–4), preceded by a small cross.⁵³ The chronology of this later production was occurred in a first

⁵³ Vernia 2005, 1112.

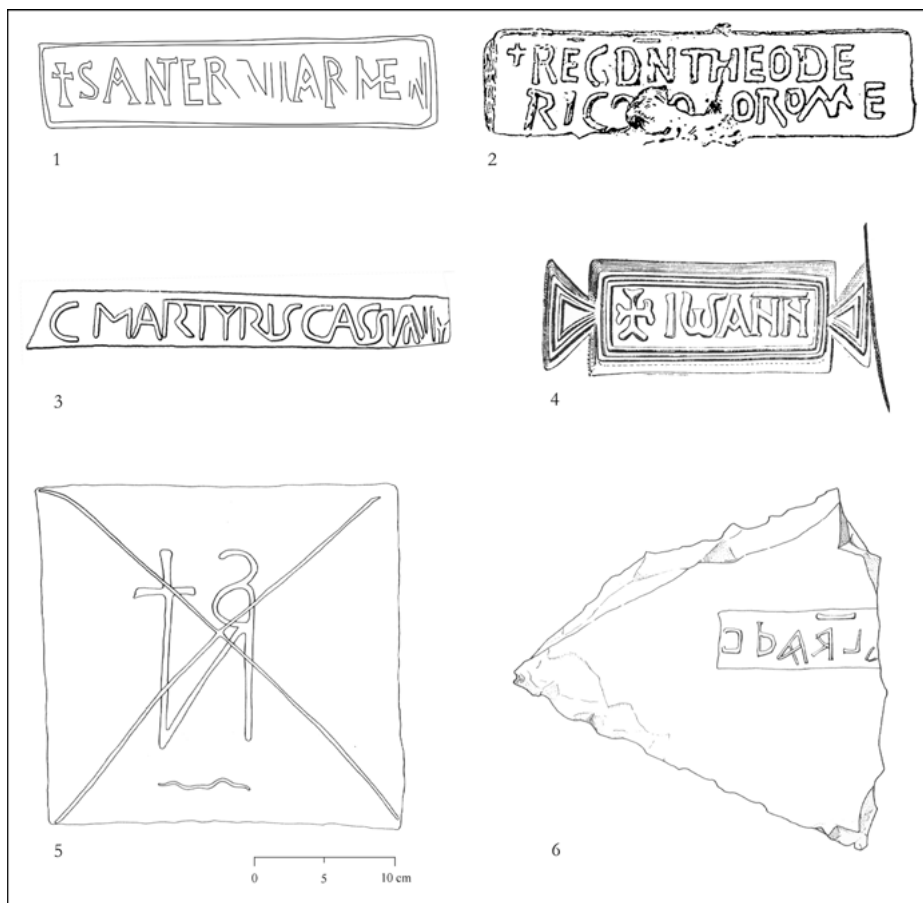


Fig. 2: Early medieval brickstamps from Italy: 1) 5th c. brickstamp found in Ravenna “SANTERNI ARMENTARIA†”, produced in its territory (Bagnacavallo); 2) King Theoderic brickstamp from Rome (“+REG(nante) D(omino) N(ostro) THEODE/RICO [b]O[n]O ROM(a)E”); 3) Brickstamp from 5th–6th c. context at Villa Clelia, Imola (Curina *et al.* 1990); 4) Brickstamp with the name “Iwann(hs)”, probably the Bishop of Rome John VII (AD 705–707), found in the Atrium of Vesta (Lanciani 1883); 5) Bishop Sabinus monogram on squared bricks from the 6th c. ecclesiastical complex at Canosa (Arthur/Whitehouse 1983); 6) Early medieval brickstamp (second half of the 6th–end of the 7th c.) found in the excavation of the monastery of Farfa, Viterbo (Arthur/Whitehouse 1983).

instance after the 3rd century⁵⁴ and then ten years postponed into the 4th century⁵⁵ because of the use of the ‘cross’. In this case, it might be the earlier example where a cross has been used as Christian official representation in Ravenna.⁵⁶ I propose

⁵⁴ Pellicioni 1983, 222.

⁵⁵ Righini/Biordi/Pellicioni 1993.

⁵⁶ Pasquini 2005, 1100.

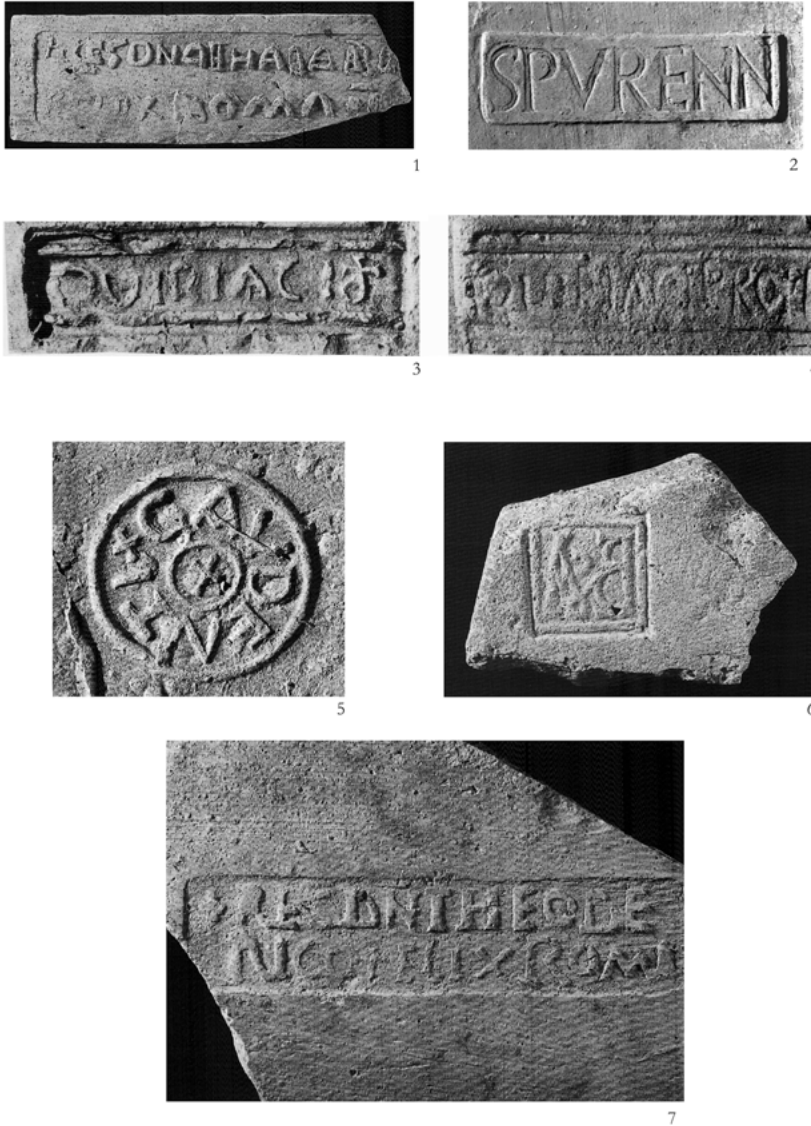


Fig. 3: Late antique brickstamps from Ravenna and Rome: 1) Athalaricus roof tile stamp (†REG D N ATHALARIC[O] FELIX ROMA ID V) from Kircherian Museum at Rome (Camilli 2001; 2) Mid-roman brickstamp from a private landowner in Ravenna's territory (*Spurenni* from Lugo); 3) 6th c. brickstamp from St. Apollinaris in Classe 5th c.: QVIRIACI OT (Pellicioni 1983); 4) 6th c. brickstamp from St. Apollinaris in Classe: QVIRIACI PROTI OT (Pellicioni 1983); 5) roof tile with stamp († GAVDENTI) from Rome (Vatta 2001); 6) Early medieval (5th–7th c.) stamped brick from Rome attributed to bishop Bonifacius or to Beronicianus, an unknown private landowner (Steinby 1986); 7) King Theoderic stamp over roof tile (†REG DN THEODE[RICO] FELIX ROMA) found in Rome (Camilli 2001).

that the production period of this *figlina* must be fixed at the beginning of the 5th century. The enormous building site that was moved in this old city to be transformed into an imperial residence surely needed new materials together with the vast quantity of reused bricks (city walls, churches, the imperial Palace, the bishop's Palace with all its buildings etc.).⁵⁷ Furthermore, in this territory, the Christian community was not yet very strong. Its diffusion, as it has well been demonstrated, occurred at the very end of the 4th century and mostly at the beginnings of the 5th century, when cities receive new basilicas with full Christianization and fuller elite patronage appear as regular builders too.⁵⁸ No church or other Christian building was attested inside Ravenna before the construction of the great basilica Ursiana, and only two small private 'shrines' are found outside the proper city's borders before the edification of the late antique city walls, linked to bishops' memories: Liberius II⁵⁹ and Severus.⁶⁰ Both were built probably at around the half of the 4th century close to their own private suburban house and overall with the purpose to receive their burials, as *mausolea*.⁶¹

Most late antique bricks have been identified at old excavations and during the last fifteen years none have been recovered at Classe. It is notable that only one *tegula* was in any case recovered at Classe, and all the yellow bricks produced by *Santerni Armentaria* kilns come from Ravenna or Bagnacavallo (Tab. 5).⁶² This is where we may identify their site of production in a *Fundus Armentarius*, whose localization was put very close to the church of St. Peter in *Silvis*.⁶³ Dimensions are also different from previous *sesquipediales*. They are 47.5 cm large x 31 cm and 4.5 cm deep and also characterized by a Crescent-moon's shape 'hand grip', what in Italian is defined 'manubriato'.⁶⁴ I do not believe that this production site was the only one that contributed to the construction of the Imperial seat. Several other suburban *figlinae* must have contributed to it and this new rise in activity added a second chance to all this territory, as demonstrated by surveys⁶⁵ and excavations.⁶⁶

Another important *figlina* operated during the second quarter of the 5th century, producing the characteristic red bricks necessities for the construction of the small mausoleum (or *martyrium*), the so-called Galla Placidia's Mausoleum, connected a bit later to the Santa Croce Basilica, wanted by Galla Placidia (AD

⁵⁷ Carile 2012; Cosentino 2015, 55; Snyder forthcoming.

⁵⁸ Christie 2006, 97.

⁵⁹ Cirelli 2008.

⁶⁰ Augenti 2006b; 2012; Augenti/Cirelli 2016.

⁶¹ Ferreri 2011.

⁶² Rossini 1938, 148, n. 138; Veggi 1964, 120, n. 4; Pellicioni 1983, 212, 222; Righini 1986, 394.

⁶³ Veggi 1964, 120; Pellicioni 1983, 222.

⁶⁴ Pellicioni 1983, n. 22.59, 237.

⁶⁵ Augenti et al. 2005.

⁶⁶ Ferreri 2014.

Table 5: Late antique private stamps from Ravenna's territory (4th–5th c.).

Stamp	Brick	Tegula	Site
QVIRIACI O†		1	Classe
QVIRIACI PROTI O†		1	Ravenna
SANTERNI ARMENTA	1		Ravenna
SANTERNI ARMENTARIA†	4		Ravenna
SANTERNI ARMENTARIA†	1		Bagnacavallo

432–450).⁶⁷ The building is entirely constructed of bricks and well preserved in height. It is a Latin-cross shaped building (12.75x10.25 m) and the elevation is now standing without the original pink plaster that covered it completely.⁶⁸ Every façade is divided by lesenes covered by small blind arches. Even though some of the original bricks were used during restoration in the 19th century, serious stratigraphic analysis has shown that the original building was built with all the same type of bricks. Old interpretations explain this evidence with the idea that the building reused material from a single structure⁶⁹ or that the coherence was due to restorations.⁷⁰ The original bricks measured 29–30 cm in length and 9–10 cm in height (Tab. 6). Bricklayers used mortar thickness within the rows of 2–2.5 cm. This type of brick is really different from most of the first to third centuries *sesquipedales* reused in Ravenna's and in Classe's buildings (mostly cut by a prototype of 44–45 x 35 x 5–8 cm). Overall the homogeneity of these materials and their dimensions must be connected to a new and different site of production, active during the second quarter of the 5th century. They are also used in other buildings, even though not with the same quantities: the Neonian baptistery, St. John Evangelist (also dedicated by Galla Placidia)⁷¹ and Saint George at Argenta (sixth-century rural church).⁷²

The fabric is not the same as others produced in the 5th century but petrographic analyses of these intense-red bricks have still not been made. A fifth-century brick production site has been identified in northern Italy from the defensive walls of the

⁶⁷ Deichmann 1969, 152–170; 1974, 48–124; Cirelli 2013b.

⁶⁸ Vernia 2005, 1128, figg. 9–10.

⁶⁹ Righini 1991; Vernia 2005, 1130.

⁷⁰ David 2013, 17.

⁷¹ Vernia 2005, 1129.

⁷² Gelichi 1992, 226. B. Vernia indicates that also in the medieval church of Saint Mary in Forlimpopoli were used bricks of the same height, but the length is different (45 cm), the same as the *sesquipedalis* (see Vernia 2005, 1129, n. 81).

late antique site of *Laumellum*, close to *Ticinum*,⁷³ with traditional bricks (43–48 x 28–32 x 5–8 cm) and new complete bricks (60x30x6 cm).⁷⁴ Other fifth-century production sites of bricks have been identified in Rome, with Emperor Arcadius' stamps,⁷⁵ and also *tegulae* from a private landowner, Gaudentius, identified with Gaudentius *vicarius Africae* (AD 409), that had a *domus* close the Basilica Hilariana.⁷⁶ The name impressed on the *tegula* (†GAVDENTI), might be referring to someone else (e.g. the son of Flavius Aëtius), overall because the vicarius of Africa was famous for being pagan, contrasting with the cross used within the stamp (Fig. 3.5).⁷⁷ The same problem of identification is connected with another stamp: a monogram that has been attributed to a private landowner named Beronicianus,⁷⁸ but more likely associated with the episcopal production of one of the Bonifacius (5th–7th c.)⁷⁹ attested in the Roman episcopal list (Fig. 3.6).

They were also possibly produced in the same period for the early construction of the ecclesiastical building of Cimitile (Naples)⁸⁰ and surely on the island of Ischia, close to St. Restituta church, where kiln wasters have also been found.⁸¹ The same evidence of a small but established brick production area is also demonstrated on Sardinia at the site of Su Marmarzu, probably a village with a rural church, where a brickstamp with *chrismon* and the inscription 'EVSEBI VIVAS' has been identified.⁸² Another stamped brick also comes from a rural site close to Vico Equense in Naples southern territory, with the *legenda* '†SPES IN DEO'.⁸³

At the beginning of the 6th century, a new unique brick production site has also been identified, often defined 'giulianea' because it has mostly been used in ecclesiastical buildings financed by Iulianus Argentarius,⁸⁴ the famous banker, who gave money for the construction of San Vitale, Sant'Apollinare *in Classe* and a smaller, possible private church, San Michele *in Africisco*.⁸⁵ All of these churches were finished between Ecclesius's and Victor's episcopate, during Goth's Kingdom and dedicated after the Gothic war with Justinian.⁸⁶ Bricks used for this new age of monumental building, at least for these three main churches, were produced in

⁷³ Sibilia/Della Torre 1987, 219.

⁷⁴ Blake/Maccabruni 1991.

⁷⁵ *CIL* XV, 1, 1660; Camilli/Vatta 2001, 223.

⁷⁶ Steinby 1986, 132–134.

⁷⁷ Vatta 2001, 224.

⁷⁸ Steinby 1986, 116, 134.

⁷⁹ *CIL* XV, 1, 1724; Camilli/Vatta 2001, 226.

⁸⁰ Arthur/Whitehouse 1983, 528. For Cimitile see: Ebanista 2008.

⁸¹ Monti 1980, 257.

⁸² *CIL* X, 8046, 15; Delussu 2008, 2668.

⁸³ *CIL* X, 8042, 139; Arthur/Whitehouse 1983, 528.

⁸⁴ Cosentino 2006.

⁸⁵ Augenti/Bertelli 2006.

⁸⁶ Cirelli 2007.

Ravenna's territory as demonstrated above. None of the bricks identified thus far have stamps, even though some of them have impressed lines (as mid-Roman 'bolli anepigrafi'), probably linked to the production process and trade of these materials (Fig. 4).⁸⁷ Dimensions of 'giuliane' bricks are normally 50x33x4 cm with a pale red fabric and crescent-moon's shape 'hand grip' (*manubriati*) as the older types. Not many other Italian cities in this period had evidence of brick production like Ravenna: Rome, with Theoderic's stamp found in the Temple of Vesta⁸⁸ and inside various restored sector of the Aurelian city walls (Fig. 2.2),⁸⁹ in Vibo Valentia (*Hipponion*), and in Calabria (†REG DN THEODE/RICO BONO ROME).⁹⁰ It is really difficult here to establish if this production had a market towards southern Italy or if, on the contrary, they were produced in *Bruttium* and transported to Rome. The furnishing of 25,000 bricks annually to Rome, indicated in a famous letter of Cassiodorus,⁹¹ came from *Porti Licini*. These *figlinae* were possibly from Rome's territory, inside a productive brand active in the 2nd and in the 3rd centuries and still active at the beginnings of the 6th century.⁹² The only 'imperial' *figlina* surely attested by stamps during Theoderic's time is the *Claudiana*, with numerous examples



Fig. 4: Brick (the so called 'giuliano' production) from the church of St. Michael in *Africisco*. Ravenna, half of the 6th c. (after Augenti 2006).

⁸⁷ Augenti 2006, 110.

⁸⁸ *CIL* XV, 1, 1714.

⁸⁹ Porta Asinaria, Porta Appia and Porta Flaminia (Coates Stephens/Parisi 1999). For the stamp brick see also: *CIL* XV, 1665b, 27; Birch 2015, 20. Other Theoderic's bricks have been also identified in a Rome's suburban bath, close to 'fosso di Prima Porta': see Messineo 2001, 16.

⁹⁰ *CIL* X, 8042, 139; Arthur/Whitehouse 1983, 528.

⁹¹ Cassiodorus, *Variae* I, 25.

⁹² Steinby 1975, 73–74; Saitta 1993, 116, n. 334.

and variants in Latin⁹³ (Fig. 3.7) and one in Greek.⁹⁴ *Officinatores* linked to Theoderic's *figlinae* are also various: Iustus,⁹⁵ Bonitus,⁹⁶ Metellus⁹⁷ and probably Laurentius.⁹⁸ A possible landowner is also known, the *dominus* Abundantius.⁹⁹ Long trade commerce of bricks has also been suggested by the identification of some bricks surely produced in the Bay of Naples, found in 5th and 6th centuries contexts at Carthage, although they may have been residuals.¹⁰⁰ Quite contemporary are the bricks produced during the episcopate of Pope Symmachus (AD 498–514)¹⁰¹ as well as ones attested to the period of Pope John I (AD 523–525) or John II (AD 533–536) at Rome, with the name stamped.¹⁰² Several new bricks (most of them *in situ*) with stamps have been recently found in the ecclesiastical complex of St. John of Canosa in Apulia, with bishop Sabinus' monogram, dated to the beginnings of the 6th century (Fig. 2.5).¹⁰³ In the same site, decorated square bricks (29.5–30 x 3–4 cm) are also attested.¹⁰⁴ The *giuliane* bricks are not to compare to bricks from Constantinople produced during the 6th century until AD 540, square in shape but with different dimensions (36.9 x 4.2 cm). In the second half of the 6th century, Byzantine bricks of Constantinople became rectangular (35.5 x 33.5 x 4.1 cm) but always much smaller than that of Ravenna's production.¹⁰⁵ Augenti recently demonstrated that *giuliane* bricks were used in other Ravenna's building, like Saint Agatha and the *Moneta Aurea*¹⁰⁶ and reused inside the medieval church of Saints Philip and Jacob¹⁰⁷ as well as inside some rural churches ('pievi') in the territories of Ravenna and Rimini, for instance at St. Martin in *Barisano*, St. Michael in *Acervoli*, St. Pancratius and Santarcangelo di Romagna, where a massive quantities of 'giuliane' type bricks have been reused.¹⁰⁸

Excavations in northern Italian sites, Monte Barro for instance, demonstrate that Lombardy brick production (primarily roof tiles, both *tegulae* and *imbrices*, but

⁹³ *CIL* XV, 1, 1563.

⁹⁴ Steinby 1974, n. 24.

⁹⁵ *CIL* XV, 1, 1664, 1668.

⁹⁶ *CIL* XV, 1, 1680.

⁹⁷ *CIL* XV, 1, 1703.

⁹⁸ *CIL* XV, 1, 1697.

⁹⁹ *CIL* XV, 1, 1676.

¹⁰⁰ Arthur/Whitehouse 1983, 529. For the commerce of ancient bricks coming from northern Italy, see: Righini 2008.

¹⁰¹ *CIL* XV, 1, 1714. It is uncertain if the Symmachus written over the stamp is the Pope or another public owner.

¹⁰² *CIL* XV, 1, 1695.

¹⁰³ Giuliani/Leone/Volpe 2013, 1139.

¹⁰⁴ Arthur/Whitehouse 1983, 534, fig.7.2–3.

¹⁰⁵ Bardill 2004; Augenti 2006, 113.

¹⁰⁶ Augenti 2005, 27.

¹⁰⁷ Augenti 2007.

¹⁰⁸ Gelichi/Delogu/Gabrielli 2000, 159, 162–163.

Table 6: Late antique and medieval (1st–8th c.) brick dimensions in Italy.

Name	Measure	Chronology
‘Sesquipedale cisalpino’ (Ravenna)	45 x 30 x 5–8 cm	1st–3rd c.
‘Mezzo sesquipedale’ (<i>semilater</i>) (Ravenna)	45 x 16 x 5–8 cm	1st–3rd c.
<i>Bessale</i> (Ravenna)	22 x 22 x 5 cm	1st–3rd c.
<i>Santerni Armentaria</i> product. (Ravenna)	47.5 x 31 x 4.5 cm	4th–5th c.
Galla Placidia’s bricks (Ravenna)	40 x 29–30 x 9–10 cm	5th c. (AD 425–450)
Lomello’s bricks	60 x 30 x 6 cm	414 ± 90
‘Giuliano’ (Ravenna)	50 x 33 x 4–4.5 cm	First half of the 6th c.
Theoderic’s bricks (Rome)		First half of the 6th c.
Constantinople bricks	36.9 x 36.9 x 4.2 cm	First half of the 6th c.
Canosa’s bricks	29.4 x 29.4 x 3–4 cm	First half of the 6th c.
Constantinople bricks	35.5 x 33.5 x 4.1 cm	Second half of the 6th c.
Early medieval ‘sesquipedalis’ (Northern Italy)	44.4 x 29.6 x 6–8.5 cm	6th–8th c.

also bricks) was still active using the same typologies of the previous centuries.¹⁰⁹ It also seems that brick production in most of northern Italy continued using quite similar dimensions to the traditional *sesquipedalis* (44.4 x 29.6 x 6–8.5 cm),¹¹⁰ but possibly destined for specific buildings or a single order for monastic communities,¹¹¹ new churches¹¹² or fortifications.¹¹³ A new format (30–55 x 14–16 x 6.5–7 cm) was used from the 9th century in northern Italy, with numerous variants until the 11th century all inside rural and urban sites.¹¹⁴

There is no evidence of other brick production in Ravenna between the second half of the 6th century and before late medieval times (13th century).¹¹⁵ Although, it is possible that some brick production also continued in the early Middle Ages, as happened in Rome. Here, some bricks with a stamp inside a ‘*tabula ansata*’ with

¹⁰⁹ Ubaldi 2000, 13.

¹¹⁰ Negro Ponzi 2000, 54.

¹¹¹ Parenti 1994; Moran 2000.

¹¹² Fiorilla 1986.

¹¹³ Blake/Maccabruni 1986.

¹¹⁴ Negro Ponzi 2000, 55.

¹¹⁵ Novara 2000, 129–132; Augenti 2003.

the name ‘†IΩANN(ES)’ were found in the Atrium of Vesta,¹¹⁶ possibly produced during the times of the pope John VII (AD 705–707) (Fig. 2.4) for the construction of a bishop’s palace close to Santa Maria *Antiqua*.¹¹⁷ A bit of evidence is also coming from monastic contexts. For instance at Farfa, where brickstamps have been found that date between the second half of the 6th and the end of the 7th centuries (Fig. 2.6).¹¹⁸ Carolingian production of bricks and roof tiles is also attested at Santa Maria *foris portas* in Castelseprio, confirmed by archaeometric analyses,¹¹⁹ as well as at Cividale del Friuli and Aquileia.¹²⁰

Tegulae and *tubuli*, cylindrical ceramic pipes (vaulting tubes) used to build domes and vaults, and overall *imbrices*, roof tiles whose production has never been interrupted, are different cases. In addition to 5th century stamped *tegulae* found at Sant’ Apollinare, they are also found in Rome with the stamp of King Athalaric (AD 526–530) (Fig. 3.1).¹²¹ Three *tegulae*, probably produced at the beginning of the 5th century, have been identified inside late antique funerary contexts at the site of villa Clelia (Imola) with stamps of ‘S(an)c(t)i Martyris Cassiani’ (Fig. 2.3).¹²² New *tegulae* were probably also produced later for the church of San Severo at the end of the 6th century. This church was built using the same size and plan of the basilica of Saint’ Apollinare inside the city walls of Classe, reusing bricks from every type of construction and period, some with Alexander Severus’ stamp (Fig. 5) and others with bricks of Pansiana or Hadrian.¹²³ Production of *tegulae* is also witnessed in north Italy, for instance at Milan,¹²⁴ in the cathedral of Monza,¹²⁵ at Terno d’Isola (Bergamo) using thermoluminescence,¹²⁶ and in eighth-ninth centuries contexts at Treviolo (Bergamo)¹²⁷ and Brescia.¹²⁸ A famous ninth century artisan “Iuvenus magister

116 De Rossi 1870; Lanciani 1883, 494–495; Arthur/Whitehouse 1983, 526, fig. 1.

117 *Lib. Pont.*, I, 385.

118 McClendon/Whitehouse 1982.

119 Martini/Sibilia/Spinolo 1985, 215–217; Della Torre et al. 1988, 135–138.

120 Fiorilla 1987; Buora 2000, 87.

121 *CIL* XV, 1, 1675; Camilli/Vatta 2001, 225, I.10.4.

122 Donati/Susini 1979, 44; Righini 1986, 394; Curina et al. 1990, 202–205; Righini/Biordi/Pellicioni Golinelli 1993, 72.

123 Cirelli 2011.

124 One *tegula* with the inscription ‘Reg’ identified close the Dome and in Via Croce Rossa, linked to Lombard kingdom urban investments. At the same seventh-eight centuries production are referred also bricks and other productions with the stamp ‘REX’, reused in SS. Nazario and Simpliciano, and in Concorrenzo and Gropello Cairoli out of Milan. See: Ubaldi 1991, 155, tav. CCV, 17–18; Ubaldi 2000, 17, fig. 5.

125 More than three hundred *tegulae* recovered from St. John the Baptist church, built by Theodelinda, one with the eighth-century inscription written before cooking: *S(an)c(t)i Ioh(annis)*. See: David 1988, 97; Ubaldi 2000, 15.

126 Martini/Sibilia/Spinolo 1986, 166.

127 Sibilia/Della Torre 1989, 80.

128 Della Torre 1990, 162.

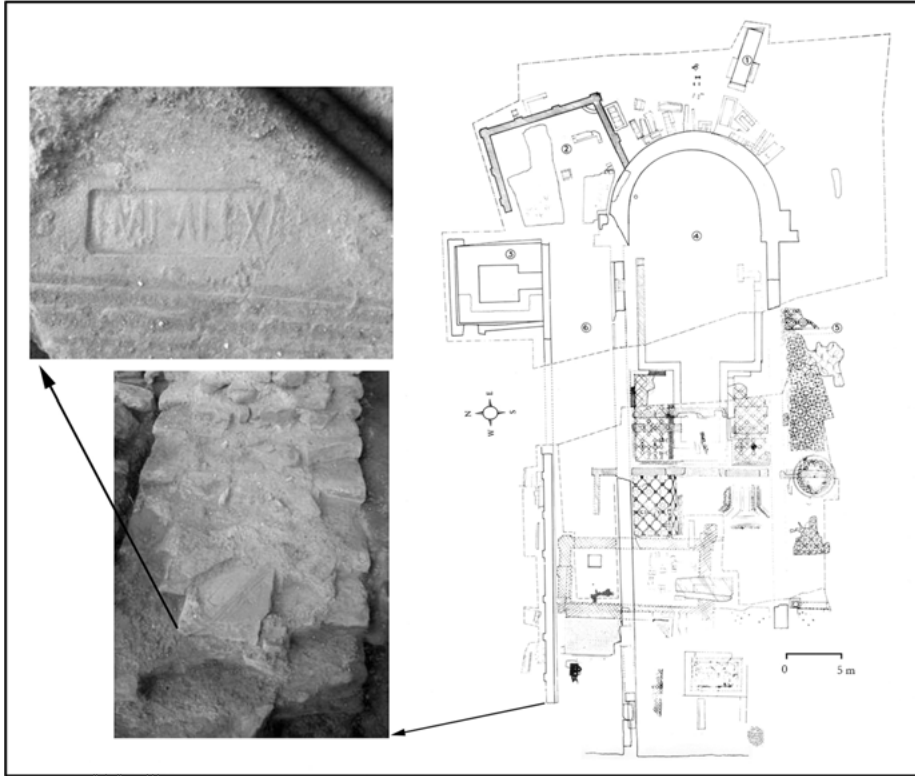


Fig. 5: Severus Alexander Emperor brickstamp reused in the basilica of St. Severus in Classe (end of the 6th c.) (photo E. Cirelli).

teularius" (IVVE/(N)VS/MAGIS/TE(R) TE/VLARIO), has left his name on a *tegula* prior to firing, which is preserved in the Archiepiscopal Museum of Ravenna (Fig. 6). It also testifies to roof-tiles production in this city during the Carolingian times¹²⁹ or at the beginnings of the 10th century.¹³⁰

The case of the production of *tubuli*, which have been largely found during old and new archaeological excavations inside Ravenna and Classe,¹³¹ is totally different. This type of material could not have been reused and its first use was also the last. If brick and roof tile production continued, even with different typologies and quantities during the Middle Ages as well, *tubuli fictiles* were not used in Ravenna after the end of the 6th century. What we know at the moment is that, following this, a construction

¹²⁹ Fiorilla 1986, 39. For Ravenna during Carolingian time see: Augenti 2008.

¹³⁰ Gelichi/Delogu/Gabrielli 2000, 139, fig. 1.

¹³¹ Augenti 2011; 2013.



Fig. 6: Ninth century roofing tile with *magister teularius* inscription (photo SBAAR, n 126375, published in Gelichi/Delogu/Gabrielli 2000). (Archbishop's Museum, Ravenna).

‘crisis’ was observed in Ravenna’s churches (Fig. 7).¹³² The last building where we have wide evidence of the use of *tubuli fictiles* is the last great ecclesiastical building of this gold age of construction: the huge church of San Severo.¹³³ Vaulting tubes were placed one inside the other, giving a lightweight vault and a good acoustic system, but overall to avoid the use of wooden centering (*centinae*) – temporary structure upon which the bricks of an arch or vault were laid during construction. Vaults built with *tubuli* were completely self-supporting, easier, quicker and cheaper to build (Fig. 8),¹³⁴ but with the use of the right mortar, small modular brick groin or barrel vaults were constructed without centering¹³⁵ (like those used in the construction of cisterns and small churches of Constantinople). It is a constructive method commonly

¹³² Augenti 2007; Cirelli 2007.

¹³³ Augenti 2009.

¹³⁴ Storz 1997; Lancaster 2009.

¹³⁵ Tomasello 2006.

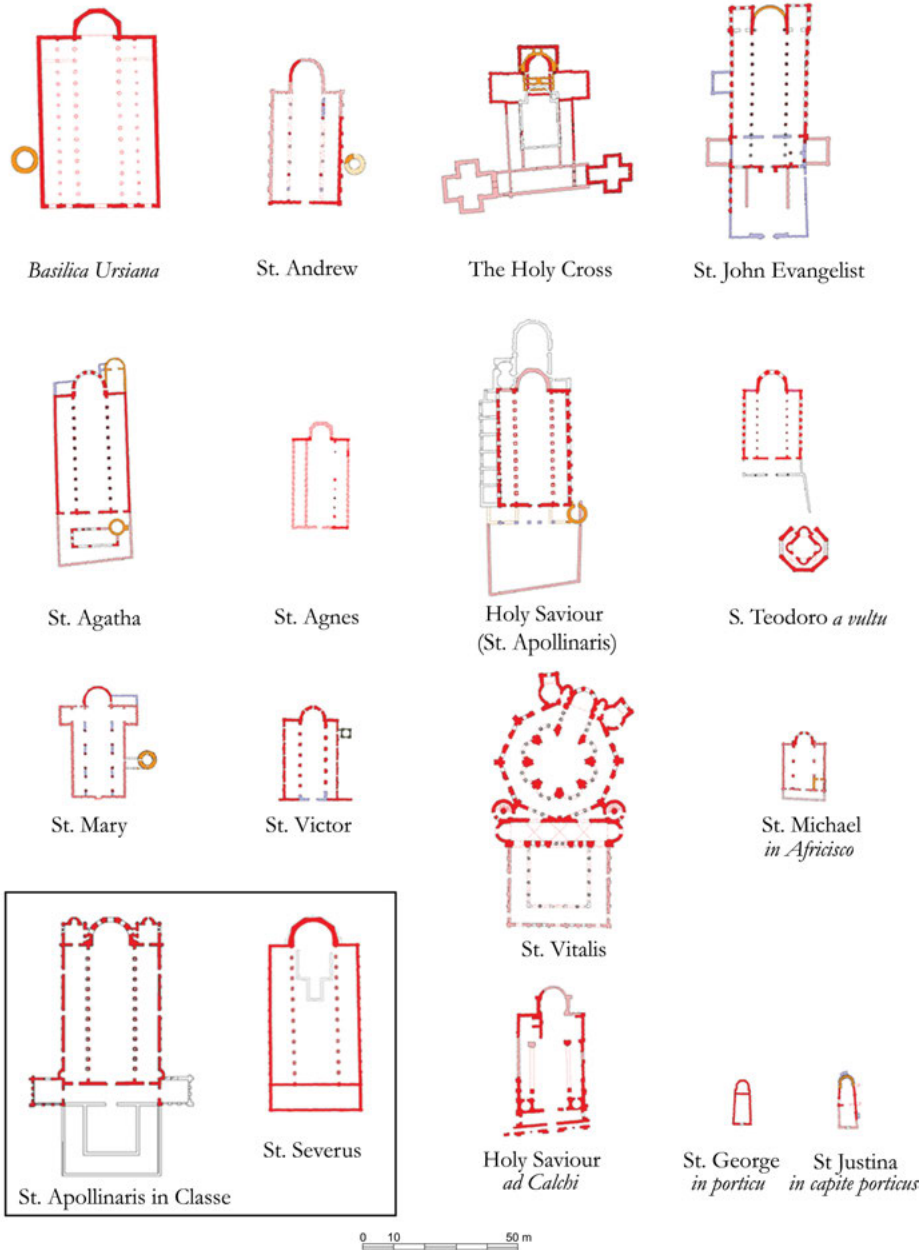


Fig. 7: Size and time. The evolution of Ravenna's church from 5th to 10th c. (after Cirelli 2007).

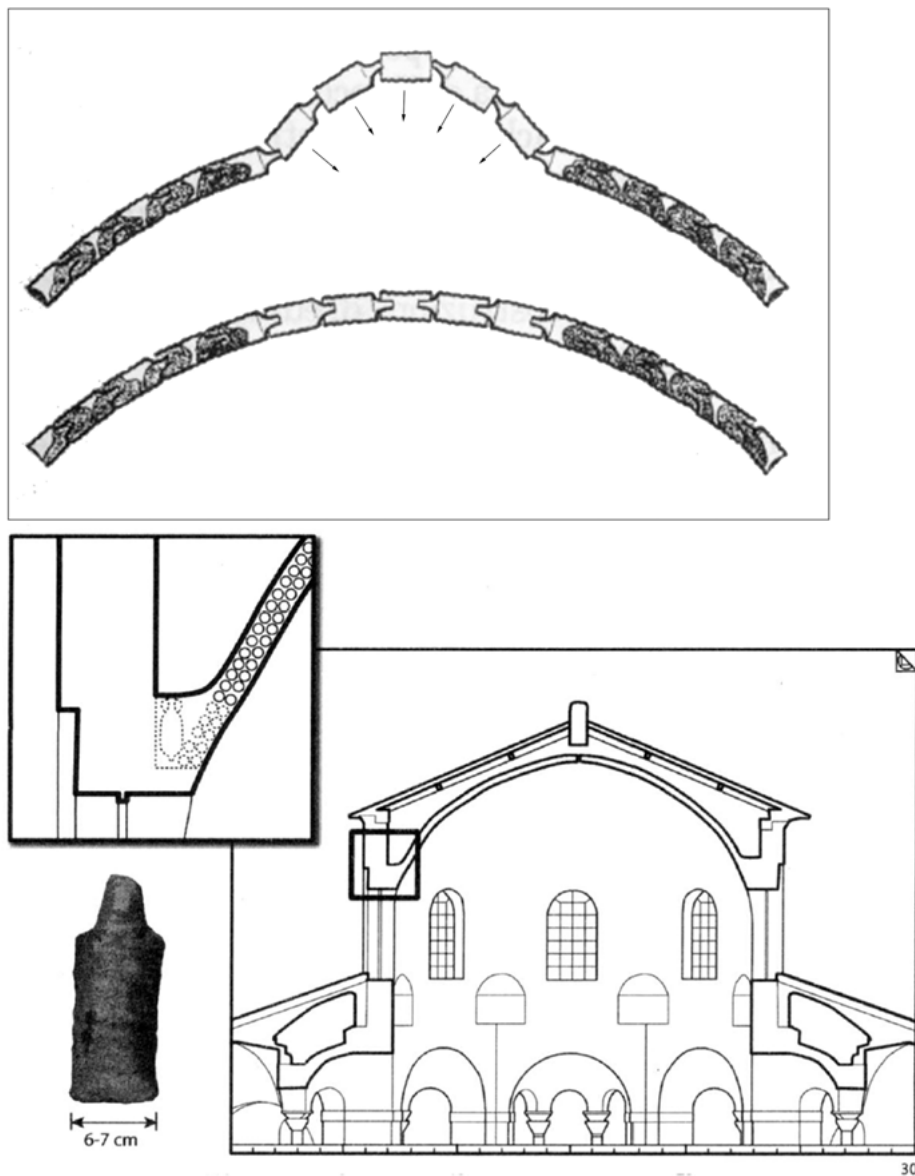


Fig. 8: Vaulting tubes installation system (after Lancaster 2009).

used in many Mediterranean territories, probably first experimented in North-Africa during the 2nd century.¹³⁶ Most late antique buildings in Ravenna have used this

¹³⁶ Lézine 1954; Wilson 1992, 108.

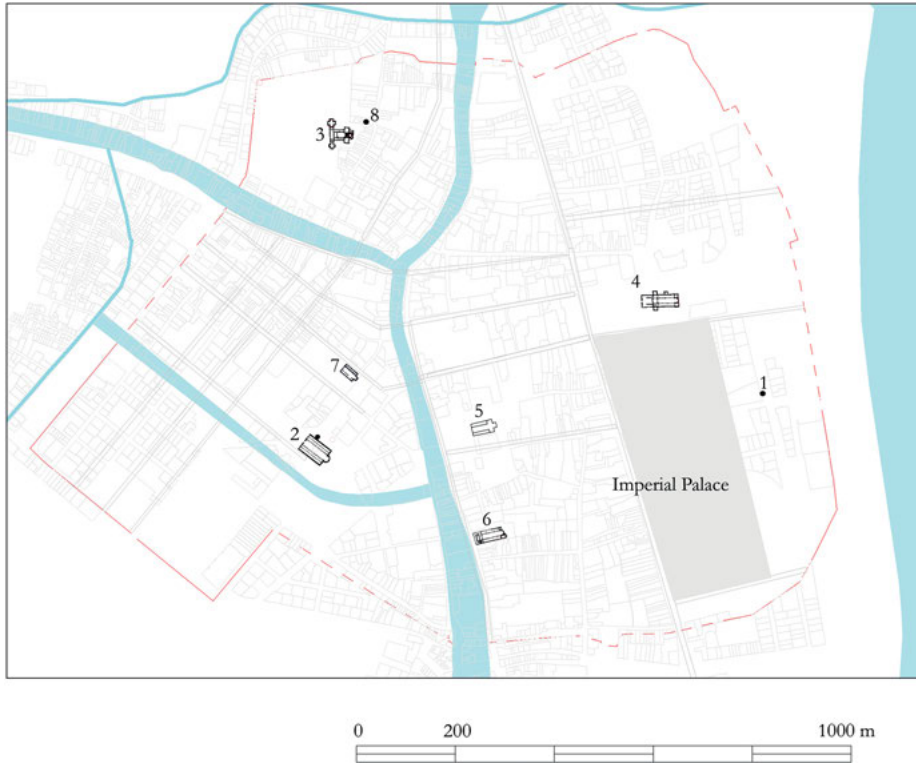


Fig. 9: Early churches and Christian buildings at Ravenna, within the late antique city walls (beginnings of the 5th c.): 1) Liberius mausoleum, St. Pullione (mid 4th c.); 2) *Basilica Ursiana* (beginnings of the 5th c.); 3) The Holy Cross and Galla Placidia's mausoleum (5th c.); 4) St. John Evangelist; 5) *Basilica Apostolorum*, now St. Francis (5th c.); 6) St. Agatha (5th c.); 7) St. Agnes (5th c.); 8) Ss. John and Barbatianus (5th c.) (after Cirelli 2008).

system: from the older church, the basilica Ursiana¹³⁷ and its Baptistry,¹³⁸ Santa Croce, San Vitale, Sant'Agata, Sant'Apollinare in Classe,¹³⁹ and the bishop's palace baths.¹⁴⁰ New impressive evidence comes also from Augenti's *basilica Petriana* excavations.¹⁴¹ With the same technique, a small building whose identification is still uncertain has also been built using ceramic vaulting tubes, close the Imperial Palace complex (Via Alberoni/Via Pallavicini)¹⁴² (Fig. 9.1). I proposed to associate this with

¹³⁷ Deichmann 1956, 37.

¹³⁸ De Angelis D'Ossat 1962, 146–147.

¹³⁹ Russo 1996; Novara 2000, 124; Russo 2003a, 4–9; 2003b.

¹⁴⁰ Cirelli 2008, 118.

¹⁴¹ Augenti/Boschi/Cirelli 2010.

¹⁴² Manzelli 2000, 151–152; Cirelli 2008.

monasterium Sancti Pullionis, known from *Liber Pontificalis*, where Agnellus said a bishop named Liberius (AD 377) was buried in the 4th century. This is the oldest building testified at Ravenna with evidence of *tubuli fictiles*.

Vaulting tube types are similar but change in shape and fabric color and composition even inside the same building and inside the same vault, as shown by Augenti's recent excavation evidence.¹⁴³ They were produced in different kilns and had long distance commerce, as show by their presence inside shipwrecks identified both in the Tyrrhenian Sea (mostly around Sicily: eight shipwrecks, Fig. 10, Table 7) and along the eastern coast of the Adriatic for instance.¹⁴⁴ Numerous

Table 7: List of the major underwater finds of vaulting tubes (from Wilson 1992).

Country	Site	Chronology
Spain (Balears)	Capo Bianco	3rd–6th c. wreck
Spain (Cartagena)	Cabo de Palos	3rd–6th c. wreck
France	Gruissan	3rd–6th c. wreck
France	Cap d'Agde	3rd–6th c. wreck
France	Dramont	3rd–6th c. wreck
France	Antibes	3rd–6th c. wreck
Italy (Tuscany)	Punta Ala	3rd–6th c. wreck
Italy (Tuscany)	Punta del Fenaio, Giglio	3rd–6th c. wreck
Italy (Sardinia)	Lavezzi	3rd–6th c. wreck
Italy (Sicily)	Marsala	1st c. BC–2nd c. AD wreck
Italy (Sicily)	Femmina Morta (Ragusa)	4th c. wreck
Italy (Sicily)	Ognina (Syracuse)	3rd c. wreck
Italy (Sicily)	Cefalù	6th c. wreck
Italy (Sicily)	Himera	4th–6th c. wreck
Italy (Sicily)	Filicudi (Capo Graziano)	2nd c. B.C. wreck
Italy (Sicily)	Lipari	3rd–5th c. wreck
Italy (Sicily)	Panarea	3rd–5th c. wreck
Italy (Apulia)	Acque Chiare	2nd–3rd c. wreck
Croatia	Hvar	6th c. wreck

¹⁴³ Augenti 2012.

¹⁴⁴ Bound 1987. Several unpublished vaulting tubes coming from close shipwrecks are visible in Stari Grad Museum in the island of Hvar.

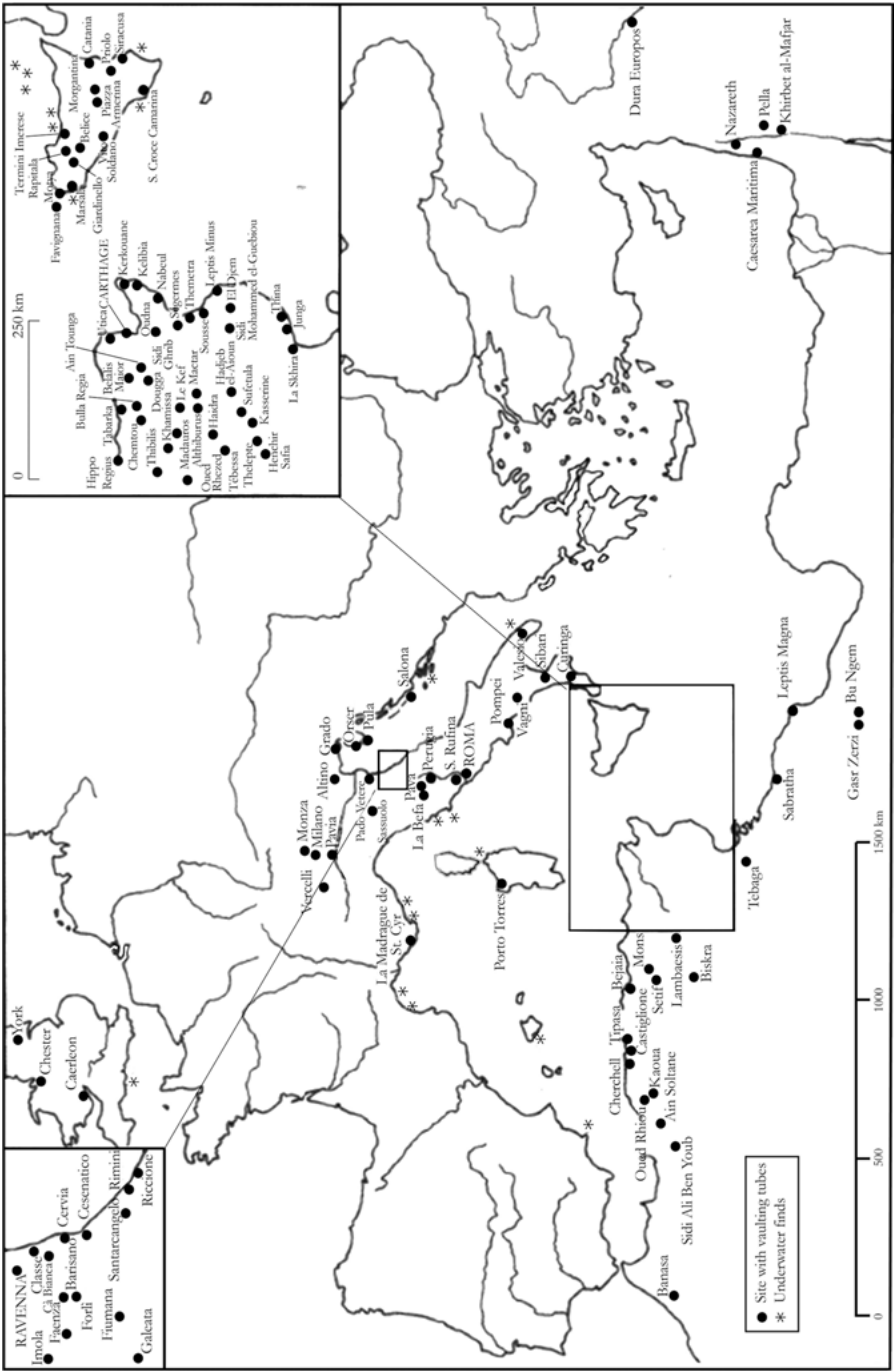


Fig. 10: Distribution map of buildings with vaulting tubes (1st-10th c.) and underwater finds (E. Cirelli).

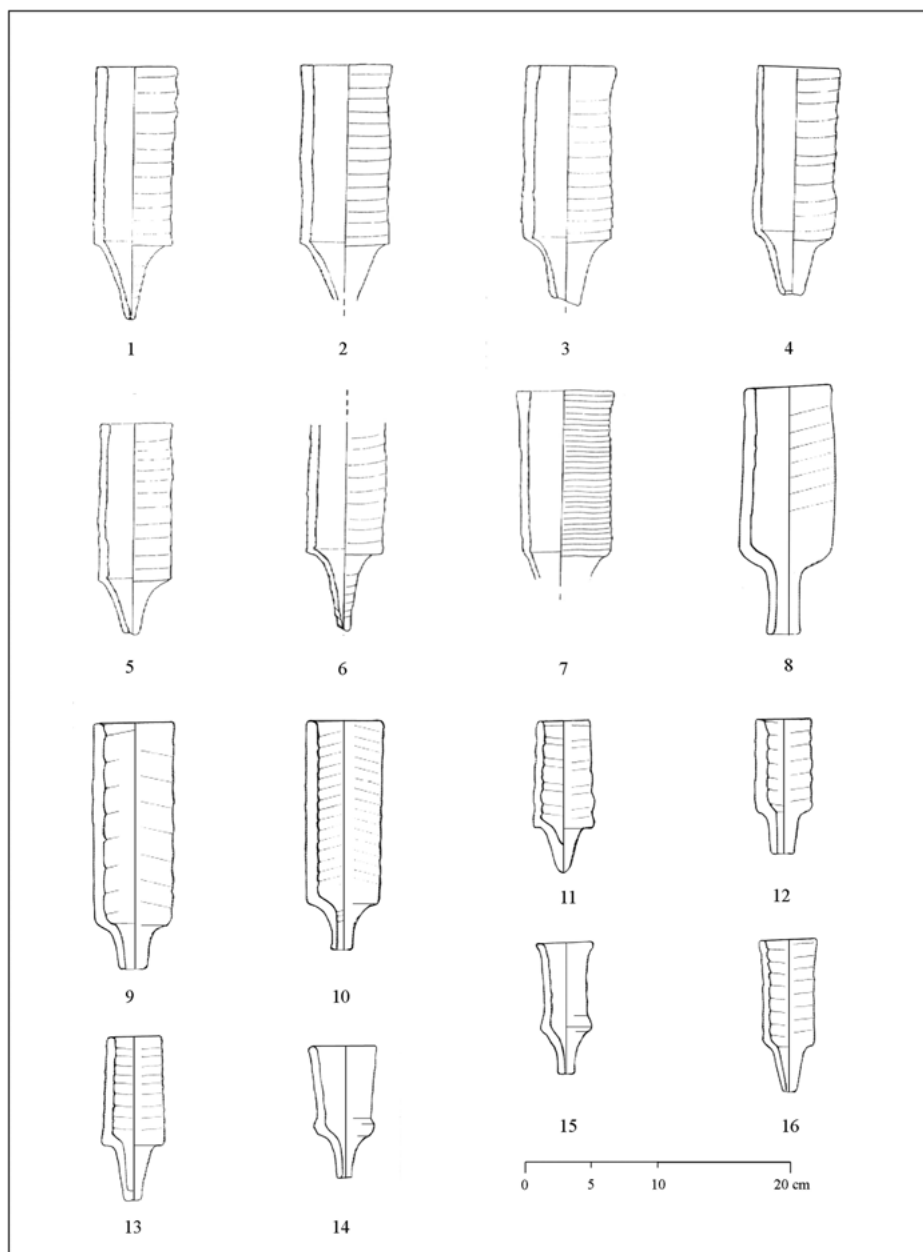


Fig. 11: Sample of vaulting tubes from Ravenna and Classe (E. Cirelli).

Table 8: Late antique and early medieval vaulting tubes in Italy (3rd–10th c.).

Site	Building	Context of use	Chronology
Ravenna	Liberius mausoleum (St. Pullione, Via Alberoni\Via Pallavicino)	dome	4th c.
Ravenna	Basilica Ursiana	Hemispherical vault (apse)	First quarter of the 5th c.
Ravenna	Neonian Baptistery	Dome	Half of the 5th c.
Ravenna	<i>Basilica Apostolorum</i> (San Francesco)	Hemispherical vault (apse)	Second half of the 5th c.
Ravenna	San Giovanni Evangelista	Hemispherical vault (apse)	5th–6th c.
Ravenna	San Salvatore (Sant'Apollinare Nuovo)	Hemispherical vault (apse)	End of the 5th c.
Ravenna	St. Andrew at Bishop's Palace	Hemispherical vault (apse)	Second quarter of the 6th c.
Ravenna	San Vitale	Dome	Second quarter of the 6th c.
Ravenna	Sant'Agata	Hemispherical vault (apse)	Half of the 6th c.
Ravenna Classe	Bishop's Palace Bath Basilica Petriana	Dome Hemispherical vault (apse)	6th c. 5th c.
Classe	Small building close to St. Apollinaris	Dome	6th c.
Classe	San Severo	Hemispherical vault (apse)	End of the 6th c.
Cà Bianca (Ravenna)	St. Demetrius	Hemispherical vault (apse)	End of the 5th–6th c.
Faenza	Kilns	Vaults	3rd c.
Forlì	Kilns	Vaults	3rd c.
Galeata (Forlì)	Theoderic Villa (Bath)	Dome	End of the 5th–6th c.
Fiumana (Forlì)	Kilns	Vaults	4th c.
Barisano (Forlì)	St. Martin	Hemispherical vault (apse)	6th c.

Table 8 (continued)

Site	Building	Context of use	Chronology
Santarcangelo (Rimini)	Kilns (S. Ermete)	Vaults	3rd c.
Santarcangelo (Rimini)	St. Michael <i>in Acervoli</i>	Hemispherical vault (apse)	6th c.
Santarcangelo (Rimini)	Kilns (via Palazzina\Via Resistenza)	Vaults	6th c.
Santarcangelo (Rimini)	Kilns (Lott. Spina)	Vaults	6th c.
Rimini	Various and sporadic finds		3rd-second half of the 6th c. contexts
Rimini	Chirurgo <i>Domus</i>	Vaults	End of the 3rd–4th c.
Rimini	Kilns	Vaults	End of the 3rd–4th c.
Riccione	Kilns	Vaults	3rd c.
St. Mary <i>in Pado Vetere</i> (Ferrara)	Baptistery	Dome	6th c.
Orser (Istria)	Basilica	Hemispherical vault (apse)	Mid 5th c.
Pula (Istria)	Basilica	Hemispherical vault (apse)	6th c.
Grado	St. Euphemia	<i>Martyrium</i> dome	Second half of the 6th c.
Pavia	St. John <i>Domnarum</i>	Hemispherical vault (apse)	7th c.
Pavia	Sts. Gervasius and Protasius	Vault	6th c.
Milan	St. Aquilinus in St. Lawrence	Hemispherical vault (apse)	End of the 4th c.
Milan	St. Simplicianus	Archway soffit branches	End of the 4th–5th c.
Milan	St. Vittore in Ciel d'Oro in St. Ambrose	Dome	Mid 5th c.
Milan	St. Tecla	Hemispherical vault (west semi-apse)	End of the 5th c.
Milan	St. Lawrence	Dome	10th c.
Monza	Theodelinda's basilica	Archway soffit	6th–7th c.

Table 8 (continued)

Site	Building	Context of use	Chronology
Vercelli	St. Eusebius	Hemispherical vault (apse)	6th c.
Pava (Siena)	Bath villa under St. Peter's church	Dome	4th–5th c.
La Befa (Siena)	Bath villa	Dome	4th c.
Rome	St. Rufina, mausoleum		4th c.
Rome	Holy Cross in Lateran, Baptistry	Dome	Mid 5th c.
Rome	St. Stefano Rotondo	Vaults	5th c.
Rome	Sts. Cosmas and Damian	Hemispherical vault (apse)	6th c.
Rome	St. Anastasia		4th–5th c.?
Rome	St. Costanza, in St. Agnes	Vaults	4th c.
Rome	St. Agatha <i>dei Goti</i>	Hemispherical vault (apse)	End of the 5th c.–6th c.
Vagni (Salerno)	villa		4th c.?
Curinga (Catanzaro)	Bath villa	Dome	3rd–4th c.
Sibari			Mid 4th c.
Valesio (Brindisi)	Bath	Dome	3rd–4th c.
Syracuse	Daphne bath	Dome	7th c.?
Marsala (Lilibeo)	Bath villa	Cross vault	3rd–4th c.
Piazza Armerina	Various rooms	Vaults	4th–5th c.
Mothia	<i>Domus</i>		4th–5th c.
Porto Torres	Sporadic		5th c.

vaulting tubes identified at Ravenna show Tunisian fabrics and they might have been imported from northern African ateliers, together with the many Red Slip vessels, lamps and amphorae imported between the 5th and the 7th centuries in its extraordinary late antique port.¹⁴⁵ Fabrics and dimensions are different (Fig. 11) and

¹⁴⁵ Cirelli 2015.

it is not possible at the moment have an idea of the evolution from one type to another.¹⁴⁶

Many other northern Italian sites show the use of this materials and techniques during Late Antiquity. For instance in Piemonte, where they are found inside the episcopal complex of St. Eusebius at Vercelli, restored by bishop Flavianus (dead AD 542).¹⁴⁷ Here, ceramic vaulting tubes also have different dimensions (h. 10.5–15.4 cm; ø 4.4–4.5 cm).¹⁴⁸ In St. Eusebius finds have also been analyzed using petrographic and chemical methods showing the contemporary presence of at least two main groups of products, one coming from close kilns and the other probably imported from Po Valley ateliers.¹⁴⁹ Numerous ceramic pipes for vaults have been also identified in Milan's underground excavations¹⁵⁰ as well as at St. Tecla,¹⁵¹ St. Simplicianus,¹⁵² and S. Vittore in Ciel d'Oro.¹⁵³ These have also been found in buildings still standing in Rome like St. Stefano Rotondo (on the Celian Hill), also with different size and types of *tubuli* used inside the same vault.¹⁵⁴ The main site where we have this technique and material during Late Antiquity is Ravenna and they were used also inside other close cities like Rimini, where possible kilns have been discovered,¹⁵⁵ but also at rural sites such as St. Michael in *Acervoli* at Santarcangelo di Romagna.¹⁵⁶ However, *tubuli* have been used in many other places such as Istria, France, Spain, England, Syria, Jordan and Palestine.¹⁵⁷

At the moment, the only attested example of a later than sixth-century use of vaulting tubes in Italy has been found inside the ecclesiastical complex of St. Lawrence in Milan (10th century), dated using archaeometric analyses (Table 8).¹⁵⁸ However, we have one other early medieval example in Palestine, at Khirbet al-Mafjar, inside the eighth-century bath of Hisham Palace,¹⁵⁹ inside the ninth-century Aghlabide baths at Dougga, in Tunisia,¹⁶⁰ in the Hafside mosque at Sidi ben Aïssa à Gabès and in El-Abdeliya Library at Marsa.¹⁶¹

146 Lancaster 2009, 6.

147 Pantò/Uggé 2004, 25.

148 Lancaster 2009, 14.

149 Pantò/Uggé 2004, 29.

150 Ubaldi 1991, 154.

151 Ruffolo 1970, 65.

152 Verzone 1938, 8–9.

153 Monneret de Villard 1924, 150–151.

154 Storz 1995, 680–681.

155 Stoppioni 1993, 80–87, 109–112;

156 Russo 2003, 210.

157 Wilson 1992, 125–129; Russo 2003, 192–198.

158 Pantò/Uggé 2004, 32, 34; Antico Gallina 2011, 23–24.

159 Hamilton 1959; Creswell 1989, 183.

160 Louhichi 1998, 110.

161 Mrabet 1997.

Conclusions

Brick production in Ravenna and its territory did not stop during Late Antiquity and had two main peaks of fabrication: at the beginnings of the 5th century and then in the first half of the 6th century with the Ostrogothic kingdom. That is the same trend that we may observe for the building activities during the same period, when the small Roman city became an imperial residence and when King Theoderic renewed the construction activity with the idea of a new capital for its imperial chair. Evidence for this production comes from archaeological excavations and from standing buildings in Ravenna. Two different centers of fabrication produced fifth-century bricks from the close territories in Bagnacavallo and one probably from the south-eastern hinterland, when ferrous clay was much more diffused. One other great center of production, whose center of manufacture has not been established, was instead active at the beginnings of the 6th century and was used for buildings whose construction started during Ostrogothic administration of the city (San Michele in Africisco, San Vitale and Sant' Apollinare in Classe). Their petrographic characteristics are identical to the Po Delta's territory, close to Ravenna. Augenti already demonstrated that they do not come from Constantinople, where bricks were completely different both in size and fabric at this moment. This brick production was flanked by a massive reuse of bricks from the ruins and demolition of the older Roman houses and temples. Systems of set up, different size of brick or mortar joint dimensions and curtain wall finishing were not so important for the aesthetic perception of these buildings, once covered with painted plasters, now destroyed and removed for our naked aesthetic idea. During the same period (4th–6th centuries) bricks atelier in the territory of Ravenna also produced cylindrical ceramic pipes used for vaults and domes. Roofing tiles were produced without interruption, including after the 6th century for new buildings and restoration of the older monuments. This framework is partly similar to other territories. During Late Antiquity, Italian cities in northern Lombard territories, as well as other traditional Roman landscapes, saw brick production decrease but not a total abandonment. Dimensions, quantities and systems of production completely changed from Antiquity, but Ravenna's materials and building techniques are the same of a tradition Roman city in Western Europe.

Bibliography

Primary Sources

Lib. Pont. = *Le Liber Pontificalis. Texte, introduction et commentaire* par L. Duchesne, vol. I. Paris 1886.

Secondary Sources

- Antico Gallina, Maria Vittoria, 2011: “«Si vero forno [. . .] cum caccabos fecerit» (Mem. 7a). Spunti per la rilettura di una tecnica nella lunga durata.” *Archeologia dell'Architettura* XV: 9–30.
- Arena, Maria S., Delogu, Paolo, Paroli, Lidia, Ricci, Marco, Sagui, Lucia and Vendittelli, Laura. 2001. Eds. *Roma dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*. Milano.
- Arthur, Paul and Whitehouse, David. 1983. “Appunti sulla produzione laterizia nell'Italia centro-meridionale tra il VI e XII secolo.” *Archeologia Medievale* X: 525–537.
- Augenti, Andrea. 2001 “La città: dalla tarda antichità all'età comunale.” In *Volterra da Ottone I all'età comunale*, Catalogo della Mostra, edited by Andrea Augenti, 25–29. Siena.
- Augenti, Andrea. 2003. “La chiesa di S. Nicolò: archeologia dell'architettura”. In *Domus del Triclinio. Alla scoperta di Ravenna romana*, Catalogo della mostra, 29–33. Ravenna.
- Augenti, Andrea. 2004. “Fonti archeologiche per l'uso del legno nell'edilizia medievale in Italia.” In *Civiltà del legno. Per una storia del legno come materia per costruire dall'antichità ad oggi*, edited by Paola Galetti, 37–69. Bologna.
- Augenti, Andrea. 2005. “Archeologia e topografia a Ravenna: il palazzo di Teoderico e la Moneta Aurea.” *Archeologia Medievale* XXXII: 7–33.
- Augenti, Andrea, ed. 2006a. *Le città italiane tra la tarda Antichità e l'alto Medioevo*. Firenze.
- Augenti, Andrea. 2006b. “L'architettura: i materiali per l'edilizia.” In *Santi Banchieri Re. Ravenna e Classe nel VI secolo. San Severo il tempio ritrovato*, Catalogo della mostra (Ravenna, 4 marzo-8 ottobre 2006), edited by Andrea Augenti and Carlo Bertelli, 110–113. Milano.
- Augenti, Andrea. 2007. “San Michele in Africisco e l'edilizia ecclesiastica ravennate tra V e X secolo.” In *San Michele in Africisco e l'età giustiniana a Ravenna, Atti del convegno “La diaspora dell'arcangelo: San Michele in Africisco e l'età giustiniana”*, Giornate di studio in memoria di Giuseppe Bovini (Ravenna, 2005), edited by Claudio Spadoni and Linda Kniffitz, 233–247. Cinisello Balsamo.
- Augenti, Andrea. 2008. “A tale of two cities. Rome and Ravenna between 7th and 9th century AD.” In *774, ipotesi su una transizione*, edited by Stefano Gasparri, 175–198. Thurnout.
- Augenti, Andrea. 2009. “Dalla villa romana al monastero medievale: il complesso di San Severo a Classe.” In *Ideologia e cultura artistica tra Adriatico e Mediterraneo orientale (IV-V secolo). Il ruolo dell'autorità ecclesiastica alla luce di nuovi scavi e ricerche*, edited by Raffaella Farioli Campanati, 245–260. Bologna.
- Augenti, Andrea. 2010. *Città e porti dall'Antichità al Medioevo*. Roma.
- Augenti, Andrea, ed. 2011. *Classe, indagine sul potenziale archeologico di una città scomparsa*. Bologna.
- Augenti, Andrea. 2012. “Strategie della memoria: la topografia monumentale di Classe alla luce delle ultime scoperte archeologiche.” In *Martiri, santi, patroni – per una archeologia della devozione: Atti X Congresso Nazionale di Archeologia Cristiana (Università della Calabria, 2010)*, edited by Adele Coscarella and Paola De Santis, 537–553. Arcavacata di Rende.
- Augenti, Andrea. 2013. “Classe: archeologia di una città scomparsa.” In *Potere e politica nell'età della famiglia teodosiana*, edited by Isabella Baldini Lippolis and Salvatore Cosentino, 219–236. Bari.
- Augenti, Andrea. 2014 “Archeologia della città medievale.” *Archeologia Medievale* XL extra: 173–182.
- Augenti, Andrea and Bertelli, Carlo, eds. 2006. *Santi Banchieri Re. Ravenna e Classe nel VI secolo. San Severo il tempio ritrovato, Catalogo della mostra (Ravenna, 4 marzo-8 ottobre 2006)*. Milano.

- Augenti, Andrea, Boschi, Federica and Cirelli, Enrico. 2010. "Il sito della basilica Petriana a Classe. Dalla diagnostica archeologica allo scavo." *Ocnus* 18: 103–116.
- Augenti, Andrea and Cirelli, Enrico. 2016. "San Severus and religious life in Ravenna during the ninth and tenth centuries." In *Ravenna: its role in medieval change and exchange*, edited by Judith Herrin and Jinty Nelson, 297–321. London.
- Augenti, Andrea, De Brasi, Giulia, Ficara, Marilisa and Mancassola, Nicola. 2005. "L'Italia senza corti? L'insediamento rurale in Romagna tra VI e IX secolo." In *Dopo la fine delle ville: le campagne dal VI al IX secolo*, edited by Gian Pietro Brogiolo, Alexandra Chavarría Arnau and Marco Valenti, 17–52. Mantova.
- Baldini Lippolis, Isabella. 2001. *La domus tardoantica: forme e rappresentazioni dello spazio domestico nelle città del Mediterraneo*. Bologna.
- Bardill, Jonathan. 2004. *Brickstamps of Constantinople*. Oxford.
- Bergonzoni, Franco and Bonora, Giovanna. 1976. *Bologna Romana. Fonti letterarie - carta archeologica del centro urbano*, I. Bologna.
- Bertacchi, Luisa. 1986. *Le mura di fortificazione (Aquileia)*, in *Da Aquileia a Venezia*. Milano.
- Birch, Samuel. 2015. *History of Ancient Pottery*, vol. 2. Cambridge.
- Blake, Hugo and Maccabruni, Claudia. 1986. "Lomello (PV). Loc. Villa Marina. Stanziamento romano e medievale." *Notiziario. Soprintendenza Archeologica della Lombardia*: 175–177.
- Blake, Hugo and Maccabruni, Claudia. 1991. "Lomello (PV). Mura tardo antiche e strutture medievali." *Notiziario. Soprintendenza Archeologica della Lombardia*: 110–112.
- Bollini, Maria. 1985. "Claterna". In *Ozzano dell'Emilia. Territorio e beni culturali*, 13–21. Bologna.
- Bottazzi, Gianluca and Bigi, Paola, eds. 2010. *La produzione laterizia nell'area appenninica della Regio Octava Aemilia*. San Marino 2010.
- Bound, Mensun. 1987. "Tubi fittili (vaulting tubes) from the Sea. The Roman Wreck at Punta del Fenaio, Island of Giglio." *International Journal of Nautical Archaeology* XVI: 187–200.
- Brogiolo, Gian Pietro. 2000. "Capitali e residenze regie nell'Italia longobarda." In *Sedes regiae (ann. 400–800)*, edited by Gisela Ripoll and José M. Gurt, 135–162. Barcellona.
- Brühl, Carlrichard. 1967. "Remarques sur les notions de 'capitale' et de 'residence' pendant le haut Moyen Age." *Journal des Savants*: 193–215.
- Buora, Maurizio. 2000. "I laterizi in Friuli nell'alto medioevo." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 75–92. Ravenna.
- Camilli, Luciano, Vatta, Germana. 2001. "Bolli laterizi." In *Roma dall'antichità al medioevo. La storia. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Sagui, and Laura Vendittelli, 223–226. Milano.
- Carile, Maria Cristina. 2012. *The Vision of the Palace of the Byzantine Emperors as a Heavenly Jerusalem*. Spoleto.
- Carile, Maria Cristina and Cirelli, Enrico. 2016. "Architetture e decoro del complesso vescovile ariano: ipotesi ricostruttive e modelli di riferimento." In *Il patrimonio culturale tra conoscenza, tutela e valorizzazione. Il caso della 'Piazzetta degli Ariani' a Ravenna*, edited by Giuseppe Garzia, Alessandro Iannucci and Mariangela Vandini, 97–127. Bologna.
- Catarsi Dall'Aglio, Manuela. 1998. "Parma. Un contesto di età tardoantica." In *Ceramica in Italia; VI-VII secolo, Atti del Convegno in onore di John W. Hayes (Roma, 1995)*, edited by Lucia Sagui, 607–609. Firenze.
- Catarsi Dall'Aglio, Manuela and Dall'Aglio, Pier Luigi. 1992. "Le città dell'Emilia occidentale fra tardoantico e altomedioevo." *Studi e documenti di Archeologia* 7: 9–29.
- Cavaliere Manasse, Giuliana. 1987. "Verona." In *Il Veneto nell'età romana*, vol. 2, 1–57. Verona.

- Christie, Neil. 2006. *From Constantine to Charlemagne: An Archaeology of Italy, AD 300–800*. Aldershot.
- Christie, Neil and Gibson, Sheila. 1988. "The city walls of Ravenna." *Papers of the British School at Rome* 66: 156–197.
- Cirelli, Enrico. 2007. "Élites civili ed ecclesiastiche nella Ravenna tardoantica." *HAM* 13/2: 301–318.
- Cirelli, Enrico. 2008. *Ravenna. Archeologia di una città*. Firenze.
- Cirelli, Enrico. 2011 "Spolia e riuso di materiali tra la tarda Antichità e l'alto Medioevo a Ravenna." *Hortus Artium Medievalium* 17: 39–48.
- Cirelli, Enrico. 2013a. "Le città dell'Italia del nord all'epoca dei re (888–962)." In *Italia, 888–962: una svolta, IV Seminario Internazionale (Poggibonsi, 2009)*, edited by Marco Valenti and Chris Wickham, 131–168. Turnhout.
- Cirelli, Enrico. 2013b. "La topografia della «Gaita di Santa Maria Maggiore» dall'Antichità al Medioevo." In *La basilica di Santa Croce. Nuovi contributi per Ravenna tardoantica*, edited by Max David, 67–92. Ravenna.
- Cirelli, Enrico. 2014. "La villa romana." In *Storia di Russi. Dalla villa alla città*, edited by Eraldo Baldini and Dante Bolognesi, 335–343. Ravenna.
- Cirelli, Enrico. 2015. "Dall'alba al tramonto. Il vasellame di uso comune a Ravenna e nel suo territorio tra la tarda Antichità e l'alto Medioevo (III-VIII sec.)." In *Le forme della crisi. Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d. C.)*, *Atti del Convegno di Spoleto-Campello sul Clitunno, 2012*, edited by Enrico Cirelli, Francesca Diosono and Helen Patterson, 13–19. Bologna.
- Coates Stephens, Robert and Parisi, Antonella. 1999. "Indagine su un crollo delle mura aureliane." *Analecta Instituti Danici* XXVI: 85–98.
- Cosentino, Salvatore. 2006. "Le fortune di un banchiere tardoantico. Giuliano Argentario e l'economia di Ravenna nel VI secolo." In *Santi Banchieri Re. Ravenna e Classe nel VI secolo. San Severo il tempio ritrovato*, Catalogo della mostra (Ravenna, 4 marzo-8 ottobre 2006), edited by Andrea Augenti and Carlo Bertelli, 43–52. Milano.
- Cosentino, Salvatore. 2015. "Ravenna from imperial residence to episcopal city: processes of centrality across empires." *Rechtsgeschichte – Legal History* 23: 54–67.
- Cosentino, Salvatore. 2016. "Trasformazioni economiche ed egemonie sociali nelle città dell'Oriente mediterraneo tra Antichità e Medioevo." In *Paesaggi urbani tardoantichi: casi a confronto. Atti delle Giornate Gregoriane, VIII edizione (Agrigento, 29–30 novembre 2014)*, edited by Maria Concetta Parello and Maria Serena Rizzo, 9–15. Bari.
- Cracco Ruggini, Lellia and Cracco, Giorgio. 1977. "Changing Fortunes of the Italian City from Late Antiquity to Early Middle Ages." *Rivista di filologia e istruzione classica* 105: 448–475.
- Creswell, Keppel A.C. 1989. *A Short Account of Early Muslim Architecture*, revised and supplemented by J.W. Allan. Aldershot/Cairo.
- Curina, Renata. 1997. "Le mura di selenite di Bologna: una nuova testimonianza archeologica." *Archeologia dell'Emilia Romagna* 1: 77–84.
- Curina, Renata, Farello, Patrizia, Gelichi, Sauro, Novara, Paola and Stoppioni, Maria Luisa. 1990. "Contesti tardo-antichi e alto-medioevali dal sito di Villa Clelia (Imola, Bologna)." *Archeologia Medievale* XVII: 121–234.
- Dall'Aglio, Pier Luigi. 1999. "La primitiva «mater ecclesia» di Parma e il lato settentrionale delle mura tardoantiche." In *Terras . . . situmque earum quaerit. Studi in onore di Nereo Alfieri*, edited by Pier Luigi Dall'Aglio, 51–62. Imola.
- David, Max. 1988. "Un problema di storia edilizia: lo studio dei tetti degli edifici «a lunga durata» ed il caso del Duomo di Monza." In *Monza anno 1300. La basilica di S. Giovanni Battista e la sua facciata*, edited by Roberto Cassanelli, 95–105. Monza.

- David, Max. 2013. "Evergetismo imperiale e rinnovamento urbanistico a Ravenna in età teodosiana." In *La basilica di Santa Croce. Nuovi contributi per Ravenna tardoantica*, edited by Max David, 11–40. Ravenna.
- De Angelis D'Ossat, Guglielmo. 1962. "Nuovi dati sulle volte costruite con vasi fittili." *Studi Ravennati. Problemi di architettura paleocristiana*, vol. 2, 137–155. Ravenna.
- Deichmann, Friedrich W. 1956. *Studien zur Architektur Konstantinopels im 5. und 6. Jahrhundert nach Christus*. Baden-Baden.
- Deichmann, Friedrich W. 1969. *Ravenna. Geschichte und Monumente*. Wiesbaden.
- Deichmann, Friedrich W. 1974. *Ravenna. Hauptstadt des spätantiken Abendlands, Kommentar II/1s*. Wiesbaden.
- Deichmann, Friedrich W. 1975. *Die Spolien in der spätantiken Architektur*. München.
- Deichmann, Friedrich W. 1976. "Il materiale di spoglio nell'architettura tardo-antica", *CARB* 23: 131–146.
- Della Torre L. 1990. "Brescia. Casa Pallaveri. Analisi di datazione con dosimetria termoluminescente." *Notiziario. Soprintendenza archeologica della Lombardia*: 162.
- Della Torre et al. 1988. "Santa Maria foris portas: datazione con termoluminescenza." *Sibrium* XIX: 135–138.
- Delogu, Paolo. 1980. "Il regno longobardo." *Storia d'Italia*, I, edited by Giuseppe Galasso, 1–216. Torino.
- Delogu, Paolo. 1990. "Longobardi e Romani: altre congetture." In *Langobardia*, edited by Stefano Gasparri and Paolo Cammarosano, 111–167. Udine.
- Delussu, Fabrizio. 2008. "L'insediamento romano di Sant'Efis (Orune, Nuoro). Scavi 2004–2006. Nota preliminare." In *L'Africa Romana. Le ricchezze dell'Africa. Risorse, produzione, scambi. Atti del XVII Convegno (Sevilla, 2006)*, IV, edited by Julián González, Paola Ruggieri, Cinzia Vismara and Raimondo Zucca, 2657–2672. Roma.
- De Rossi, Giovanni Battista. 1870. "D'un singolar bollo di mattone trovato nell'Emporio Romano." *Bollettino di Archeologia Cristiana* II: 7–32.
- Donati, Angela and Susini, Giancarlo. 1979. "Le pietre iscritte." In *Imola dall'età tardo-romana all'alto medioevo. Lo scavo di villa Clelia*, 43–44. Imola.
- Ebanista, Carlo. 2008. "Interventi edilizi d'età medievale nella basilica di S. Felice a Cimitile." In *Il complesso basilicale di Cimitile. Patrimonio culturale dell'umanità? Convegno internazionale di Studi (Cimitile, 2004)*, edited by Mario De Matteis and Carlo Ebanista, 147–186. Napoli.
- Ferreri, Debora. 2011. "Spazi cimiteriali, pratiche funerarie e identità nella città di Classe." *Archeologia Medievale* XXXVIII: 59–74.
- Ferreri Debora. 2014. "Le trasformazioni del paesaggio della Valconca." In *Gli scavi di San Pietro in Cotto e il territorio della Valconca dall'età romana al Medioevo*, edited by Enrico Cirelli, 239–249. Rimini.
- Fiorilla, Salvina. 1986. "Bolle e iscrizioni su laterizi altomedievali del territorio lombardo." *Archivio Storico Lombardo* CXII: 1–85.
- Fiorilla, Salvina. 1987. "Laterizi decorati altomedievali del Museo Archeologico Nazionale di Cividale del Friuli." *Forum Iulii* X-XI: 41–45.
- Gelichi, Sauro. 1989. "Modena e il suo territorio nell'alto medioevo." In *Modena dalle origini all'anno Mille. Studi di storia e archeologia*, I, 153–165. Modena.
- Gelichi, Sauro. 1992. *Storia e archeologia di una pieve medievale: San Giorgio di Argenta*. Firenze.
- Gelichi, Sauro. 1998. "Regium Lepidi tra tardo-antico ed alto-medioevo." *Archeologia medievale in Emilia occidentale. Ricerche e studi*, edited by Sauro Gelichi, 11–16. Mantova.
- Gelichi, S. 2000. "Ravenna, ascesa e declino di una capitale!" In *Sedes regiae (ann. 400–800)*, edited by Gisela Ripoll and José M. Gurt, 109–134. Barcellona.

- Gelichi, Sauro. 2001. "L'insediamento nella penisola italica durante il periodo longobardo: metodologie dell'analisi archeologica e risultati." In *Visigoti e Longobardi*, edited by Javier Arce and Paolo Delogu, 219–238. Firenze 2001.
- Gelichi, Sauro. 2005. "Le mura di Ravenna". In *Ravenna da capitale imperiale a capitale esarcale, Atti del XVII Congresso internazionale di studio sull'alto medioevo (Ravenna, 2004)*, 821–840. Spoleto.
- Gelichi, Sauro, Delogu, Alessandra and Gabrielli, Rossana. 2000. "Le pievi e l'uso dei laterizi nel territorio ravennate." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 137–167. Ravenna.
- Gelichi, Sauro and Malnati, Luigi. 1986. "Modena e Reggio Emilia dal II al VII secolo." In *Società romana e impero tardoantico. Le merci e gli insediamenti*, edited by Andrea Giardina, 544–563. Roma/Bari.
- Gelichi, Sauro and Novara, Paola, eds. 2000. *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*. Ravenna.
- Gentili, Gino V. 1979. "Il mosaico dell'Ercules bibax o del porto canale tra i mosaici di una domus adrianea a Rimini." *Bollettino d'Arte per i Beni Culturali e Ambientali* 44, 1: 49–56.
- Gentili, Gino V., Mansuelli, Guido A., Susini, Giancarlo and Veggiani, Antonio. 1967. *Sarsina. La città romana, il museo archeologico*. Bologna.
- Giordani, Nicoletta. 2000. "Modena." In *Aemilia. La cultura romana in Emilia-Romagna dal III sec. a. C. all'età costantiniana*, edited by Mirella Marini Calvani, 423–434. Venezia.
- Giuliani, Roberta, Leone, Danilo and Volpe, Giuliano. 2013. "Il complesso episcopale di Canosa nell'area di S. Giovanni dalle origini all'altomedioevo: una rilettura della topografia cristiana della città alla luce delle più recenti ricerche archeologiche". In *Episcopus, Civitas, Territorium*, Acta XV Congressus Internationalis Archaeologiae Christianae (Toleti, 2008), 1137–1160. Città del Vaticano.
- Guidobaldi, Federico. 2016. "La formulazione progettuale della basilica cristiana come ulteriore espressione dell'innovazione costantiniana nel campo dell'architettura." In *Costantino e i Costantinidi. L'innovazione costantiniana, le sue radici e i suoi sviluppi*, Acta XVI Congressus Internationalis Archaeologiae Christianae (Roma, 2013), edited by Olof Brandt and Vincenzo Focchi Nicolai, 461–492. Città del Vaticano.
- Hamilton, R.W. 1959. *Khirbat al-Maffjar: An Arabian mansion in the Jordan valle*. Oxford.
- Lancaster, Lynne C. 2009. "Terracotta vaulting tubes in Roman Architecture: A case study of Interrelationship. Between Technologies and Trade in the Mediterranean." *Construction History* 24: 3–18.
- Lanciani, Rodolfo. 1883. "L'Atrio di Vesta." *Notizie degli Scavi*: 434–514.
- Lepore, Giuseppe and Montevocchi, Giovanna. 2009. "Classe (Ravenna), suburbio." *Ocnus* 17: 155–157.
- Lézine, Alexandre. 1954. "Les voûtes romaines à tubes emboîtés et les croisées d'ogives de Bulla Regia." *Karthago* V: 168–181.
- Lippolis, Enzo. 2000. "Edilizia pubblica: fora e basiliche." In *La cultura romana in Emilia-Romagna dal III sec. a. C. all'età costantiniana*, edited by Mirella Marini Calvani, 106–115. Venezia.
- Louhichi, Adnane. 1998. "La céramique islamique de Dougga". In *L'Africa romana XVI. Mobilità delle persone e dei popoli, dinamiche migratorie, emigrazioni e immigrazioni nelle province occidentali dell'impero romano*, edited by. Aomar Akerraz, Paola Ruggeri, Ahmed Siraj, Cinzia Vismara I: 109–127. Roma.
- Lusuardi Siena, Silvia. 1984. "Ancora sulle torri 'tarde' delle mura di Como." *Archeologia Urbana in Lombardia. Catalogo della Mostra*, 67–77. Como.

- Maioli, Maria Grazia. 1984. "La casa romana del Palazzo Diotallei a Rimini (FO): fasi costruttive e pavimenti musivi." In *Atti del III Colloquio internazionale sul mosaico antico (Ravenna, 1980)*, edited by Raffaella Farioli Campanati, 461–474. Ravenna.
- Mancini, Fausto, Mansuelli Guido A. and Susino Giancarlo. 1957. *Imola nell'antichità*. Imola.
- Mansuelli, Guido A. 1941. *Ariminum*. Roma.
- Mansuelli, Guido A. 1954. "Mosaici sarsinati." *Studi Romagnoli* 5: 151–183.
- Manzelli, Valentina. 2000. *Ravenna*. Roma.
- Marini Calvani, Mirella. 1975. *Guida alla visita della zona archeologica e dell'antiquarium*. Parma.
- Marini Calvani, Mirella. 1990. "Archeologia." In *Storia di Piacenza* I/2. *Dalle origini all'anno Mille*, 765–906. Piacenza.
- Martini, Marco, Sibilia, Emanuela and Spinolo, Giorgio. 1985. "Ricerche del Laboratorio di Termoluminescenza applicata all'archeologia." *Notiziario. Soprintendenza Archeologica della Lombardia*: 215–217.
- Martini, Marco, Sibilia, Emanuela and Spinolo, Giorgio. 1985. "Terno d'Isola (BG). Presso la chiesa di S. Vittore. Strutture tardoantiche-altomedievali. Esame di un laterizio." *Notiziario. Soprintendenza Archeologica della Lombardia*: 166.
- Matijašić, Robert. 1983. "Cronografia dei bolli laterizi della figulina pansiana nelle regioni adriatiche." *Mélanges d'archéologie et d'histoire de l'École Française de Rome. Antiquité* 95, 2: 961–995.
- Mc Lendon, Charles and Whitehouse, David. 1982. "La badia di Farfa, Fara Sabina (Rieti): terza nota preliminare." *Archeologia Medievale* IX: 232–239.
- Medri, Maura. 2015. "Le mura di Aureliano: studio in corso sui paramenti laterizi della prima fase di costruzione." *Archeologia dell'Architettura* XX: 38–44.
- Meneghini, Roberto and Santangeli Valenzani, Riccardo. 2004. *Roma nell'Altomedioevo: topografia e urbanistica della città dal V al X secolo*. Roma.
- Messineo, Gaetano. 2001. "La villa Ad Gallinas Alba." In *Gallinas Alba: villa di Livia*, edited by Gaetano Messineo, 9–16. Roma.
- Monneret de Villard, Ugo. 1924. "Sull'impiego di vasi e tubi fittili nella costruzione delle volte." In *Sant'Agata dei Goti*, edited by Christian Hülsen, Carlo Cecchelli, Gustavo Giovannoni, Ugo Monneret de Villard and Antonio Muñoz, 149–154. Roma.
- Montevecchi, Giovanna and Leoni, Cristina. 2004. "Settore meridionale. Domus dei pugili: continuità d'uso (II-III d.C.)." In *Archeologia urbana a Ravenna. La "Domus dei Tappeti di Pietra". Il complesso archeologico di Via D'Azeglio*, edited by Giovanna Montevecchi, 43–47. Ravenna.
- Monti, Pietro. 1980. *Ischia, Archeologia e Storia*. Ischia.
- Moran, Matthew. 2000. "Produzione di laterizi in un monastero meridionale in epoca carolingia: San Vincenzo al Volturno (IS)." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 169–184. Ravenna.
- Mrabet, Abdellatif. 1997. "Introduction à l'étude de la céramique architecturale d'Ifriqiya: état de la question. Données archéologiques et ethno-archéologiques." In *La céramique médiévale en Méditerranée* (VIe congrès de l'AIECM2, Aix, 1995), 591–600. Aix-en Provence.
- Negrelli, Claudio. 2008. *Rimini capitale. Strutture insediative, sociali ed economiche tra V e VII secolo*. Firenze.
- Negro Ponzi, Maria Maddalena. 2000. "La produzione e l'uso dei laterizi nei siti rurali dell'Italia settentrionale tra tardo antico e medioevo. I laterizi di Trino (VC)." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 53–74. Ravenna.

- Novara, Paola. 2000. "La produzione e l'impiego di laterizi nell'alto Medioevo Ravennate." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 109–135. Ravenna.
- Ortalli, Jacopo. 1992. "Edilizia residenziale e crisi urbana nella tarda antichità: fonti archeologiche per la Cispadana." *CARB* 39: 557–605.
- Ortalli, Jacopo. 1996. "Bononia romana." In *Bologna. Da Felsina a Bononia: dalle origini al XII secolo*, edited by Giuseppe Sassatelli, Cristina Morigi Govi, Jacopo Ortalli and Francesca Bocchi, 29–45. Bologna.
- Ortalli Jacopo. 1997. "Topografia di Sarsina romana: assetto urbanistico e sviluppo architettonico." In *Architettura e pianificazione urbana nell'Italia antica*, edited by Lorenzo Quilici, Stefania Quilici Gigli, 117–157. Roma.
- Ortalli, Jacopo. 2000a. "Rimini: la *domus* del chirurgo." In *La cultura romana in Emilia-Romagna dal III sec. a. C. all'età costantiniana*, edited by Mirella Marini Calvani, 512–526. Venezia.
- Ortalli, Jacopo. 2000b. "La *domus* riminese del «chirurgo»: un percorso di ricerca", *Atti e Memorie della Deputazione di Storia Patria per le province di Romagna* 51: 171–192.
- Ortalli, Jacopo. 2001. "Formazione e trasformazioni dell'architettura domestica: una casistica cispadana." *Antichità Altoadriatiche* 49, I: 25–28.
- Ortalli, Jacopo. 2003. "L'insediamento residenziale urbano nella Cispadana." In *Abitare in città. La Cisalpina tra impero e medioevo*, edited by Michael Heinzlmann and Jacopo Ortalli, 95–119. Roma.
- Pantò, Gabriella and Uggé, Sofia. 2004. "Materiali fittili per edilizia di età altomedievale dalla chiesa di S. Eusebio a Vercelli." In *Produzione e circolazione dei materiali ceramici in Italia settentrionale tra VI e X secolo II Incontro di studio sulle ceramiche tardoantiche e altomedievali (Torino, 2002)*, edited by Gabriella Pantò, 25–37. Mantova.
- Parenti, Roberto. 1994. "Le tecniche costruttive tra VI e X secolo: le evidenze materiali." In *La storia dell'alto Medioevo italiano (VI-X secolo) alla luce dell'archeologia*, edited by Riccardo Francovich and Ghislaine Noyé, 479–496. Firenze.
- Pasquini, Laura. 2005. "L'immagine della croce come simbolo di potere in Ravenna capitale". In *Ravenna da capitale imperiale a capitale esarcale, Atti del XVII Congresso internazionale di studio sull'alto medioevo*, 1095–1105. Spoleto.
- Pellicioni, Maria Teresa. 1983. "Tipologia dei bolli laterizi ravennati." In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche tra Ravenna e Classe*, edited by Giovanna Bermond Montanari, 215–237. Imola.
- Pellicioni, Maria Teresa. 2010. "Punzoni e nominativi: spunti per un'ipotesi sul fenomeno della bollatura dai laterizi della *Regio Octava Aemilia*." In *La produzione laterizia nell'area appenninica della Regio Octava Aemilia*, edited by Gianluca Bottazzi and Paola Bigi, 17–27. San Marino.
- Riccioni, Giuliana. 1969. "Un complesso edilizio di età romana scoperto a Rimini nell'area dell'ex Vescovado", *Atti e Memorie della Deputazione di Storia Patria per le province di Romagna* 20: 313–333.
- Righini, Valeria. "Felix Roma – Felix Ravenna. I bolli laterizi di Teoderico e l'attività teodericiana in Ravenna." *CARB* 33: 371–398.
- Righini, Valeria. 1991 "Materiali e tecniche da costruzione in età tardoantica e altomedievale." In *Storia di Ravenna*, II/1. *Dall'età bizantina all'età ottoniana. Territorio, economia e società*, edited by Antonio Carile, 193–221. Venezia.
- Righini, Valeria. 2008. "I materiali fittili pesanti nella Cisalpina. Produzione e commercializzazione dei laterizi." In *Instrumenta Inscripta Latina II, Akten 2. Internationalen Kolloquiums (Klagenfurt 2005)*, edited by Manfred Haizmann and Reinhold Wedenig, 265–294. Klagenfurt.

- Righini, Valeria. 2010. "La produzione laterizia di età romana in Cisalpina ed in Cispadana." In *La produzione laterizia nell'area appenninica della Regio Octava Aemilia*, edited by Gianluca Bottazzi and Paola Bigi, 9–16. San Marino.
- Righini, Valeria, Biordi, Maurizio and Pellicioni-Golinelli, Maria Teresa. 1993. "I bolli laterizi romani della regione cispadana (Emilia e Romagna)." In *I laterizi di età romana nell'area nordadriatica*, edited by Claudio Zacaria, 23–91. Roma.
- Rossini, Giuseppe. 1938. *Le antiche iscrizioni romane di Faenza e dei Faventini*. Faenza.
- Ruffolo, Salvatore. 1970. "Le strutture murarie degli edifici paleocristiani milanesi." *Rivista dell'Istituto Nazionale d'Archeologia e Storia dell'Arte* XVII: 5–84.
- Russo, Eugenio. 1996. "Sulla cupola in tubi fittili di S. Vitale in Ravenna." *Rivista di Archeologia Cristiana* LXXII, 1–2: 285–329.
- Russo, Eugenio. 2003a. *L'architettura di Ravenna paleocristiana*. Venezia.
- Russo, Eugenio. 2003b. "Nuovi dati per la conoscenza delle volte in tubi fittili dallo scavo della chiesa di S. Agata in Ravenna", in: *Atti del VII Congresso Nazionale di Archeologia Cristiana (Cassino, 1993)*, 191–223. Napoli.
- Saitta, Biagio. 1993. *La civilitas di Teodorico: rigore amministrativo, "tolleranza" religiosa e recupero dell'antico nell'Italia ostrogota*. Roma.
- Sannazaro, Marco. 2014. "Lo sviluppo urbanistico di Milano in età paleocristiana", *Lanx* 19: 79–94.
- Scagliarini Corlàita, Daniela and Venturi, Emanuela. 1999. *Mosaici romani di Regium Lepidi*. Reggio Emilia.
- Sibilia, Emanuela and Della Torre, L. 1987. "Lomello (PV). Mura antiche della città. Analisi di datazione con dosimetria termoluminescente." *Notiziario. Soprintendenza Archeologica della Lombardia*: 219.
- Sibilia, Emanuela. 1989. "Treviolo (BG). Analisi di datazione con dosimetria termoluminiscente." *Notiziario. Soprintendenza Archeologica della Lombardia*: 80.
- Snyder, James R. forthcoming. "Bricks in the wall: an examination of brick procurement in fifth-century Ravenna." In *Economia e Territorio nell'Adriatico centrale tra tarda Antichità e alto Medioevo*, edited by Enrico Cirelli, Enrico Giorgi and Giuseppe Lepore. Bologna.
- Steinby, Eva M. 1974. "I bolli laterizi degli Antiquari del Foro e del Palatino." *Atti della Accademia nazionale dei Lincei. Classe di scienze morali, storiche e filologiche. Memorie* XVII: 63–109.
- Steinby, Eva M. 1975. "La cronologia delle figlinae doliari urbane dalla fine dell'età repubblicana ino all'inizio del III sec." *Bollettino della Commissione archeologica comunale di Roma* 84: 7–132.
- Steinby, Eva M. 1986. "L'industria laterizia di Roma nel tardo impero." In *Società romana e impero tardoantico. Le merci e gli insediamenti*, edited by Andrea Giardina, 99–164. Roma /Bari.
- Stoppioni, Maria Luisa. 1993. *Con la terra e con il fuoco: Fornaci romane nel riminese*. Rimini 2009.
- Storz, Sebastian. 1995. "La tecnica della costruzione delle volte con tubi fittili a Santo Stefano Rotondo a Roma." *CARB* XLI: 669–693.
- Storz, Sebastian. 1997. "La tecnica edilizia romana e paleocristiana delle volte e cupole a tubi fittili." In *Lo specchio del cielo. Forme significati tecniche e funzioni delle volte dal Pantheon al Novecento*, edited by Claudia Conforti, 23–42. Milano.
- Tamassia, Anna Maria. 1993. "Le antiche mura di Mantova." In *Mura delle città romane in Lombardia, Atti del convegno (Como, 1990)*, 145–152. Como.
- Tomasello, Francesco. 2006. "Volte 'leggere' a tubuli fittili tra Sicilia e Africa." *Sicilia Antiqua* 2: 145–155.
- Uboldi, Marina. 1991. "Prodotti laterizi." In *Scavi MM3. Ricerche di archeologia urbana a Milano durante la costruzione della linea 3 della Metropolitana. 1982–1990, Vol. 3.2, I reperti. Testo*, edited by Donatella Caporusso, 145–157. Milano.

- Uboldi, Marina. 2000. "Analisi dei prodotti laterizi in uso in alcuni insediamenti altomedievali della Lombardia." In *I laterizi nell'alto Medioevo italiano, Atti della giornata di studi (Ravenna, 1997)*, edited by Sauro Gelichi and Paola Novara, 11–29. Ravenna.
- Vatta, Germana. 2001. "Tegola con bollo di Gaudenzio." In *Roma dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Saguì and Laura Vendittelli, 224. Milano.
- Veggi, L. 1964. "La basilica di S. Pietro in Sylvis di Bagnacavallo." *Felix Ravenna s. III*, 89–90: 84–126.
- Vernia, Barbara. 2005. "L'analisi delle strutture murarie degli edifici di culto di Ravenna: il caso del mausoleo di Galla Placidia". In *Ravenna da capitale imperiale a capitale esarcale, Atti del XVII Congresso internazionale di studio sull'alto medioevo (Ravenna, 2004)*, 1107–1131. Spoleto.
- Verzone, Paolo. 1938. "Le cupole di tubi fittili nel V e VI secolo in Italia". In *Atti del I Congresso Nazionale di Storia dell'Architettura (Firenze, 1936)*, 7–11. Firenze.
- Wilson, Roger J. A. 1992. "Terracotta vaulting tubes (tubi fittili): on their origin and distribution." *Journal of Roman Archaeology* V: 97–129.
- Zanini, Enrico. 2016. "Byzantine City and the Archaeology of the Third Millennium." In *Proceedings of the 23rd International Congress of Byzantine Studies (Belgrade, 2016)*, edited by James Crow, Jorge López Quiroga, Vujadin Ivanišević and Enrico Zanini, 34–143. Belgrade.
- Zuffa, Mario. 1944. "Mosaici di Bononia." *Emilia Romana* 2: 3–27.

Deborah M. Deliyannis

7 The Social Sphere of Writing: Manuscripts, Inscriptions and Papyri

Abstract: The written word was an integral part of the political and cultural life of late antique and early Byzantine Ravenna. Papyri, manuscripts, and inscriptions survive, bearing witness to the fact that people were composing, producing, and reading them for a variety of purposes. When we examine what survives of Ravenna's written remains, we can clearly see that Ravenna was closely connected to a "culture of writing" in the rest of Italy in the period under consideration here, from the 5th to the 9th century. This paper argues that production and reception are linked, and we are only able to talk about a "social sphere" of writing in Ravenna when we can identify instances in which people are not only producing, but also responding in some way to a form of writing, indicating an awareness of a cultural landscape in which they are participating. We can see evidence of this to a certain degree in the papyri and in texts and manuscripts, but most clearly in the inscriptions.

The written word was an integral part of the political and cultural life of late antique and early Byzantine Ravenna. Papyri, manuscripts, and inscriptions survive, bearing witness to the fact that people were composing, producing, and reading them for a variety of purposes. The surviving objects are quite well known, and have been studied, compared, and debated by numerous scholars, in particular by Guglielmo Cavallo, whose 1992 article serves as a touchstone for any study of written culture in Ravenna.¹ Evidence for the reception of these objects, however, or the "social sphere of writing" in late antique Ravenna, has been less closely examined. The "social sphere" has been defined as "a societal self-organization to create a common cultural landscape through which a social bond among strangers is created and public life maintained."² As Nicholas Everett has demonstrated for Lombard Italy, the very existence of different forms of writing testifies to a culture in which writing is valued, and is used both functionally and ideologically.³ When we examine what survives of Ravenna's written remains, we can clearly see that Ravenna was closely connected to a "culture of writing" in the rest of Italy in the period under consideration here, from the 5th to the 9th century. However, I will argue that production and reception are linked, and we are only able to talk about a "social sphere" of writing in Ravenna when we can identify instances in which people are not only

1 Cavallo 1992.

2 Lii 1998.

3 Everett 2003.

procuding, but also responding in some way to a form of writing, indicating an awareness of a cultural landscape in which they are participating. We can see evidence of this to a certain degree in the papyri and in texts and manuscripts, but most clearly in the inscriptions.

The 6th century was a time of extraordinary productivity in all spheres in Ravenna. This is likewise true for the various forms of writing; most of the surviving manuscripts, papyri, and inscriptions date to the 6th century. In a way, therefore, the more interesting period is what came after the 7th and 8th centuries. All forms of artisanal and artistic production continued to exist in the later centuries, and the same can be said for forms of writing. Moreover, it is very clear that in the 7th and 8th (and even 9th) centuries, craftspeople in Ravenna were very definitely responding to the monuments of the 5th and 6th centuries, which gives us a much better appreciation for a “social sphere” for all these things, because it shows an audience and a reaction. We can see this in the mosaics, for example, with the later additions in Sant’Apollinare in Classe that are so clearly modelled on the mosaics in San Vitale. It can be seen in motifs on sarcophagi, as Allison Fox has recently shown.⁴ As I will show, we can also see it in the literature and inscriptions.

The ninth-century Ravennate historian Agnellus provides us with the most evidence for reactions to many different forms of writing. Agnellus’ history of bishops was modelled on the *Liber pontificalis* of Rome; but, where that text offers us a catalogue of factoids about the popes, along with narrative, Agnellus took the opportunity to broaden the scope of his text, and to incorporate a variety of different forms of writing.⁵ He therefore transcribed many inscriptions, documents, and sermons and he included quotations or paraphrases from several other hagiographies and historical texts.⁶ He clearly believed that written forms were an important part of his cultural landscape. Moreover, Agnellus was personally interested in the materiality of writing: he mentions a missal that is “a great volume, marvellously written;”⁷ a couple of times he refers to himself as “using parchment and ink,”⁸ he tells the story of his ancestor Johannicis the scribe (*notarius* and also *scriba*), who was tortured by having reeds thrust under his fingernails and being made to write with the blood for ink.⁹ The fact that Agnellus could see written texts as sources for history, in fact, the fact that he had access to them at all, is indicative of at least one function

⁴ Fox 2012.

⁵ Deliyannis 2009 and Deliyannis 2004, 20–56.

⁶ Deliyannis 2006, 20–52.

⁷ *LPRa*, 81: “grande uolumen mire exaratum”

⁸ *LPRa* Prologue: “sermonem, cartas et atramentum expendo”; ch. 110: “cartas et atramentum expendo”; ch. 141: “deflectamus . . . stilum”

⁹ *LPRa* chs. 120, 141, and 146. In ch. 146, Agnellus speaks of Iohanicis’ *notarius* Ilarus, “qui postea huius sanctae ecclesiae ab eo eruditus scriniarius fuit.”

of material forms of writing, the fact that they “commit to public memory” the things that someone thinks important.

But Agnellus is not the only person in Ravenna to have done this, and there are other examples that show us not only a demand for and production of different forms of writing, but also, and especially, the consumption of these objects. We can see that writing was used in many different formats in Ravenna, and even that written forms were simply accepted as a natural part of the way things worked. On the other hand, we can also see, at various moments, ways in which written forms are adopted consciously to reestablish a continuity or connection with the past. Both those things show how forms of writing served to create a common cultural landscape, even if only a very small segment of society was actually able to read.

Papyri and Documents

Let us start with documents. Documents were produced in Ravenna, from the early 5th to the late 8th century on papyri,¹⁰ and from the 7th century on parchment as well. The fifty that survive from between 455 and 700 show that relatively simple legal documents were quite common, that they were produced by people with training in their production, and that they were signed by some people who could write but by many more people who could only mark a cross next to their names.¹¹ The fact that illiterate people were participating in a written format as part of a property transaction tells us something about the function of writing in society. Such charters were probably intended to be read aloud when they were written, and if they were needed later on.¹²

They were produced by people who were trained and licensed in a secular context, and who are identified usually as *tabelliones* or *forenses*, sometimes as *scribae*. One papyrus has a reference to a *schola forensium*, while another is said to have been drawn up by an *adiutor* to John, *forensis huius civitatis Ravennatis*, which implies an apprentice system.¹³ In another papyrus, John the *forensis* (perhaps the same man?) had his *statio* in the portico of the palace. Tom Brown has seen a deterioration in the sophistication of the bureaucracy in the 7th century and later, and a reduction in the numbers of notaries, but even in these later periods, some scribes,

10 The papyrus documents surviving in Ravenna’s archive were first published by Marini (1805) in an edition that is still used as a reference today, although it was largely superseded by that of Tjäder (1954–82).

11 Cavallo 1992 suggests 80% were illiterate.

12 Everett 2003, 141.

13 Everett 2003, 207–9; who cites Tjäder n. 6.

clerks, *tabelliones*, notaries, and others remained laymen, indicating that education was available outside of the church.¹⁴

There were also notaries, scribes, and other writers in the *episcopium*, and these continued to exist after the secular scribal system was drastically reduced. In fact, Agnellus provides us with a piece of direct evidence about the purpose and ideals of ecclesiastical record-keeping from the 6th century. One of the most understudied items in Agnellus' text is the document that he quotes in full in the Life of Ecclesius: a *constitutio* issued for the church of Ravenna by Pope Felix IV, which dates to about 530.¹⁵ It appears that the dispute that occasioned it, between Bishop Ecclesius and his clergy, was chiefly about the rights of the different members of the church to ecclesiastical incomes. The pope, it states, reviewed the documents (*capitula*) presented by the bishop and priests, and then mandated, among other things, a proper organization of the church's scribes and record-keepers:

Let the notaries in order of office, the *primicerius*, the *secundicerius*, the third, fourth, fifth, sixth and seventh, maintain the ecclesiastical documents in their legal register in the sight of the priests and deacons according to a list of reliable summaries (*sub fidelium breuium descriptione*); let them give and receive them so that, whatever case requires it, they may be faithfully presented. However we order them to do all things with the order and decree of their bishop. For again, all the ecclesiastical documents (*ecclesiastica documenta*) should be copied, lest in some way those received should disappear, or at the time they are needed for the uses of the church they cannot be produced. However let these notaries, vigorously observant in their office, follow without deviation the usages anciently provided for them by their elders (*prioribus suis antiquitus deputata*). For, as reason requires and precedent has ordained, let them provide books signed by the hand of the bishop for the security of those whose concern is the whole ecclesiastical patrimony.

The role of the notaries to keep copies of all documents in case the originals are lost and they are needed in a legal case underscores the fact that such documents might be needed in legal cases. The phrase "follow without deviation the usages anciently provided for them by their elders" is most suggestive in that it requires an awareness of diplomatic forms and a desire to preserve them. The fact that this *constitutio* survived until the 9th century, and that Agnellus thought that it was worthy of being quoted in full, indicates its continual applicability to ecclesiastical organization and record-keeping. And we know that registration of documents continued into the 10th century, as shown by the surviving compilation known as the *Breviarium ecclesiae Ravennatis*, which contains summaries of documents that go back to the 7th century.¹⁶

¹⁴ Brown 1984, 77–80 and 214–15.

¹⁵ *LPRA*, 60.

¹⁶ Staatsbibliothek, Munich, Clm 44; *Breviarium ecclesiae Ravennatis (Codice Bavaro)* (ed. Rabotti 1985); see Vasina 1985.

Agnellus, of course, provides us with a great deal of information about the type of documents that had survived into the 9th century. He includes information that seems to come from a variety of charters, diplomas, and wills.¹⁷ In addition, he was highly aware of the destruction of documents. He famously mentions the fact that the *archivus ecclesiae* burned at the time of Archbishop Damian around the year 700, and then he goes on to say, “and the flame consumed many documents (*monumina*), and many were seized and hidden by wicked men. Then with all the priests gathered together, the said bishop sat with them in a tavern (*in propina*), and gave anathemas of malediction, that whoever had any of the said documents and did not return them, he would be anathema, and whoever returned them, he would be innocent of blame.”¹⁸ Throughout his text, Agnellus shows great concern about the destruction of documents, and Archbishops Theodore and George in particular, whom he identifies as wicked and corrupt, are specifically accused of the destruction of documents.¹⁹ For Agnellus in the 9th century, just as for Felix IV in the sixth, documents are the way that legal rights are demonstrated.

Some scholars have drawn a distinction between the secular governmental traditions and those supported by the church, but regardless of what this shift in documentary practice might mean, the fact remains that an authority structure in the city was encouraging the continual production of documents. N. Everett suggests that Ravenna’s documentary tradition was exceptional in the West,²⁰ but if so, the fact that the documents bound Ravenna’s larger community together in legal ways is a reflection of the broader social and cultural sphere of literacy that we can see in books and inscriptions.

Scholarship, Learning, and Books

From various small pieces of information – in the letters of Ennodius, the story of Venantius Fortunatus, a mention in a papyrus of a *vir devotus magister litterarum* – we know that Ravenna was a place where people went for an education.²¹ We know that there was reading and writing of scholarly texts going on in Ravenna, and we know that manuscripts were produced at Ravenna, although the evidence for this is

¹⁷ See Deliyannis 2006, 47–49.

¹⁸ *LPRa*, 134; the archive is also mentioned in ch. 111, in which Agnellus seems to be quoting from a document that he actually saw about episcopal revenues from Sicily.

¹⁹ *LPRa*, 118: “Consuetudo uero ecclesiae, quae in singulis uoluminibus per unumquodque officium erat scripta, abstulit et igne consumpsit . . . multae schedulae.” *LPRa*, 174: “Priuilegia antiqua, cum quibus se fatebat ex potestate Romani pape subtrahere, in loto proiecta sunt et ab hastis lanceae comminuta.”

²⁰ Everett 2013.

²¹ Riché 1976, 26–30.

surprisingly elusive. All these things are, of course, linked; and, while I will briefly describe what has been proposed for each of those aspects of book usage, once again what I want to emphasize is not the individual manuscripts or texts, but the way that they were linked to their patrons, authors, and readers. These people made up, if not as broad an audience as the papyri, at least a group of people who were interacting with each other to maintain some type of literary community. Even more than that, each of these authors clearly had access to sources that included other texts, which tells us not only what authors were writing in Ravenna, but what books were available to them.

Authors and/or texts definitely or probably linked to Ravenna between 400 and 800 include the following:

- Bishop Peter Chrysologus: sermons (c. 431–450)
- Cassiodorus Senator, esp. *Variae*, history of the Goths, *Chronica* (c. 520–540)
- Athanarid, Heldebald, and Marcomir, geographers quoted by Anonymous Cosmographer (below) (489–526)
- *Corpus agrimensorum romanorum*, Codex Arcerianus (early 6th c.)
- *Anonymus Valesianus pars posterior* (540s)
- Archbishop Maximian (546–557): chronicle,²² Vulgate bible, missal²³
- Medical texts,²⁴ perhaps including *Ex herbis feminis* (early 6th c.), Latin translations of Dioscorides, Oribasius, and Rufus of Ephesus (late 6th c.), other herbal texts (7th c.), Agnellus *iatrosofista* (500–700)²⁵
- *Passio* of Apollinaris, false Diploma of Valentinian III²⁶ (perhaps under the auspices of Archbishop Maurus, 642–671)
- Rotulus of Ravenna (*Ambros. SP cass. 1* [inv. 1004]) (mid-7th c.)
- Anonymous Cosmographer (early 8th century)²⁷
- Archbishop Felix (709–725): sermon; edition of 176 of Peter Chrysologus' sermons²⁸

It is not nothing, but it is not a huge amount. Other than Chrysologus' sermons, there is nothing from the 5th century, and modern scholars conclude that while

²² *LPRA*, 42 and 78; see Deliyannis 2006, 29–30.

²³ *LPRA*, 81; see Deliyannis 2004, 195.

²⁴ Musitelli et al. 1994, 317–319.

²⁵ Agnellus, *De Sectis*; Cavarra 1993, Agnellus, *De pulsibus ad tirones*, Frampton 2008, and Riddle 1981.

²⁶ For the Diploma of Valentinian III, most scholars accept a date in the mid-7th century (see Deliyannis, ed., 2006, 102–3), although Orioli 1980, 135–44, provides reasons that it should be dated to the *pallium* controversy at the end of the 6th century.

²⁷ *Ravennatis anonymi cosmographia*, ed. J. Schnetz, *Itineraria Romana* 2 (Leipzig, 1940); on this text, see Staab 1976 and Dillemann and Janvier 1997. The *Anonymus* quotes many Greek, Roman, and Gothic “philosophers”, showing that he was well educated.

²⁸ *LPRA*, 150; see Benericetti 1995, esp. 53–76.

cultivated aristocrats in this century spent time in Ravenna, they did not make it into an intellectual center.²⁹ In the 6th and 7th centuries, we see two trends. On the one hand, there is sporadic literary activity associated with specific archbishops and/or historical moments in the Ravennate Church, and on the other hand, there are also a number of more practical texts – geographical, medical, on surveying, even historical – whose patrons and authors are, for the most part, anonymous.

The reign of Theoderic the Ostrogoth is the only time that we can see an official patronage of literary endeavors, but other than Cassiodorus, most of the authors were based in cities other than Ravenna.³⁰ Of the secular authors, Cassiodorus was a wealthy aristocrat, a scholarly powerhouse, and someone who firmly believed in the power of the written word to shape public opinion, whether in favor of the Ostrogothic regime, as in his *Variae* and lost Gothic History, or in favor of Christian scholarship, as seen in his activities at Vivarium. The letters preserved by Cassiodorus in the *Variae* are somehow never considered as part of the documentary legacy of Ravenna, and yet, better than most, they demonstrate the way that the rulers of the Ostrogothic kingdom used written forms to communicate with their subjects both high and low. If Cassiodorus was doing anything by compiling and publishing them, he was insisting upon the role of an intellectualized social sphere in the Gothic kingdom.

The Gothic geographers, the *Anonymus Valesianus*, the authors in the medical school, of the *corpus agrimensorum*, and the Cosmographer are people whose names or origins we do not really know. Most of these authors were familiar with both Greek and Latin sources, and had a wide range of books and other texts that they could consult to either translate or produce new works. The Gothic geographers are known only from the Anonymous Cosmographer, who identifies three authors of his sources as “Gothic philosophers.” For our purposes the most significant thing is that such works were still conserved somewhere in Ravenna for the Anonymous to find them.³¹ Because of one manuscript that contains the name of a Ravennate *iatrosophista* named Agnellus (not the historian), plus a few other fragments, a continuous tradition of medical studies is assumed to have existed from the early 6th to the early 8th century; this would again indicate continuity, preservation of manuscripts and texts, and a larger context in which writing was valued.³² Finally, we should

²⁹ Pietri 1983, 654–6, for the 5th century.

³⁰ See especially Momigliano 1955, Deichmann 1980, Everett 2003, 23–33; and Polara 1995, who notes that most literary culture was based in Rome. Staab 1976, identifies geographical works produced at the court of Theoderic as sources for the seventh- or eighth-century Ravenna cosmography.

³¹ Staab 1976 argues convincingly that they must have worked for Theoderic; I find his suggestion that they were written in Gothic and that the Cosmographer could read it dubious, however.

³² Frampton 2008, 340–342; Riddle 1981; Montero Cartelle 2005, 806, cites Tjäder, papyrus 25, a. 572, includes *Eugenius pal(atinus) s(a)(rarum) l(argitionum), filius Leonti medici ab schola greca*. For some caution, see Palmieri 2001.

remember the historian Agnellus' ancestor Johanicis, who died around 710 and who Agnellus says knew Greek and Latin equally well. These people represent a secular intelligentsia, whose social status is unknown, but who were reading, writing, and producing scholarly works for unknown patrons and purposes.

If we turn to ecclesiastical literary production, much of the information comes to us through Agnellus; he is the one who tells us that Maximian produced a chronicle, a bible, and a missal, and he is the one who tells us that Felix published Chrysologus' sermons. Agnellus also, within his text, embeds a number of sermons or fragments of sermons, and I have argued that because these are very disparate in style, they were not necessarily composed by him, but represent sermons that he found in the Church archive, and indeed he specifically mentions one such sermon, by Archbishop Felix. Scholars debate the date of the *Passio* of Apolenaris and the false Diploma of Valentinian III, but most agree that they were composed sometime between the mid-sixth and the mid-seventh centuries, in order to bolster the case for the status of Ravenna's bishop vis-à-vis the pope. Taken together, these facts tell us that there was, in the library/archive of the *episcopium*, a collection of manuscripts, books, and documents that could be consulted, compiled, and re-worked by those inclined to do so. In this context, the most significant piece of information is actually provided by a manuscript in Ravenna's Archivio arcivescovile, of works by St. Ambrose, produced in two phases in the early 6th century and with marginal notes in five different hands from the 5th to the 9th centuries.³³ Books in the church archive were actually read, used, and commented upon, by people who must have formed part of an intellectual circle.

We must return to Agnellus, because he provides the best example of someone actively interacting with texts. Here is the list of texts that Agnellus certainly had:

- The Roman *Liber pontificalis*
- *Passio* of Apolenaris
- "Diploma of Valentinian III"
- "Ravenna *Annales*" / *Chronicon* of Maximian
- Paul the Deacon's *Historia Langobardorum*
- Gregory of Tours, various miracle stories (*Vita patrum* etc.)
- Sermons of Peter Chrysologus
- Other random sermons, including one by Bishop Felix on the Day of Judgement
- Gregory the Great, *Liber pastoralis*, volume sent to Bishop Marinian
- Johanicis, book of antiphons in Latin and Greek

These include both ecclesiastical and secular texts. There are locally-produced ones like the *Passio*, the sermons, and the so-called Ravenna *Annales*, and there are historical texts from other places that had made their way to Ravenna. They span the

³³ Campana 1958 and Cavallo 1992.

period from the 5th to the late 8th century. We must conclude that they had been collected and preserved in a library or libraries and archives over the course of the centuries.

It seems an obvious corollary that if there was scholarship going on in Ravenna, then there must have been book-producers there as well. From the papyri, and from occasional mentions of individuals, we know that there were scribes in Ravenna, although only one has even half a chance of actually having been a book producer, the famous Wiliarit/Viliaric, identified as a *spodeus* and *bokareis* in a papyrus document and as a *magister antiquarius* in a manuscript of Orosius.³⁴ On the basis of this identification, Cavallo identified other manuscripts as coming from the same workshop, as well as some other fragments. More recently, Paolo Radiciotti has noted some bilingual Gothic-Latin fragments of manuscripts that he proposes should have come from Ravenna, the capital of the Gothic kingdom.³⁵ Another trace of a manuscript with a definite source in Ravenna is a Bible copied from one made in Ravenna in the early 6th century that names Bishop Ecclesius as the original sponsor.³⁶ And finally, it is usually taken for granted that the Codex Argenteus, a bible written on purple in silver and gold ink in the Gothic language, must have been produced in Ravenna, because where else could it have been made?³⁷

Beyond this, localizing late antique book production in Italy is a topic of scholarly debate. Cavallo's list of manuscripts produced in Ravenna is, in fact, surprisingly fragile. Many manuscripts are ascribed palaeographically only to sixth-century Italy, but then it is assumed that they must have been made in Ravenna, because there could not be many places in Italy at this time in which books were produced, and because Ravenna had artistic workshops for mosaic and sculpture. In essence, people assume a social sphere of which book production was a part. The Roman Vergil manuscript, for example, has been claimed for Ravenna but also for Rome (and even for Britain).³⁸ However, as Bernard Bischoff noted for the *Corpus agrimensorum* manuscript, a Ravenna provenance cannot be proven either palaeographically or art

³⁴ Marini, no. 119, 180–3; Tjäder, vol. 2, no. 34, 91–104: “Mirica et Sindila spodei . . . Wiliarit et Amalatheus idem spodei”. Interestingly, they sign their names as follows: “Ik Merila bokareis handau meinai ufmelida . . . signum † Sinthilianis spodei s(upra)s(crip)tae basilicae Gothorum . . . Ik Wiljarib bokareis handau meinai ufmelida . . .” Biblioteca Laurenziana, Florence, Plut. 65.1. See Bertelli 1998, 55. Cavallo 1992, 84, notes that another manuscript, Paris lat. 2235, is in the same hand, and that two other related manuscripts may also have come from Ravenna or Vivarium. See also Tjäder 1972.

³⁵ Radiciotti 2002.

³⁶ Bayerische Staatsbibliothek, Munich, Clm. 6212, is an early ninth-century Gospel book that contains an inscription saying that a certain Patricius had emended the text at the request of Bishop Ecclesius; thus this Carolingian manuscript is assumed to be a copy of one produced in Ravenna in the early 6th century; the document of 551 is quoted in full in the next chapter.

³⁷ See Munkhammar 2011.

³⁸ Ravenna: Rosenthal 1972 and Bertelli 1998; Rome: Wright 1992 and 2001.

historically.³⁹ Books were probably being produced in Ravenna in the 6th through 8th centuries, but the scale of production cannot be estimated, although Thomas Brown has suggested that after about 600, a liberal education no longer served as an avenue into government, and therefore the production of books may have declined.⁴⁰

To what extent can books and literary productions be considered part of a “social sphere”? In the first place, they were probably not part of an especially broad cultural landscape; they represent a much narrower slice of society, whether that comprises literate secular people or ecclesiastics; moreover, books and manuscripts, for the most part, are not especially public. The most interesting thing about both the literary production and the manuscripts is that their production seems to have been quite sporadic, but, at moments in which someone decided that a new text should be written or a new book produced, there were other books available to consult and there were materials available to write with. The sheer number of texts that were available to people like the Ravenna Cosmographer, Agnellus, and the medical practitioners show us a cultural landscape that was, at least, not devoid of books.

Inscriptions

Inscriptions create an environment in which writing is literally part of the scenery. Of course, as is well known, any Roman town would have contained many inscriptions, both commemorative and funerary, and there is no particular reason to suppose that these disappeared in the late antique period. Indeed, the very fact of their existence stimulated new types of inscription, especially in the context of large church-buildings. The *Corpus inscriptionum latinarum* lists 339 inscriptions for Ravenna,⁴¹ many undated, and of course many more have been discovered since. Of the inscriptions in the *CIL*, roughly 250 of them are dated to before the 4th century, and of the 90 remaining ones, a significant number are known only from transcriptions by Agnellus or by the sixteenth-century historian Girolamo Rossi. There is a distinct decline in the number of tombstones of “ordinary people” after the 5th century; those that survive tend to be of relatively high-ranking or wealthy individuals or members of the church.

This phenomenon, at Ravenna as elsewhere in the Roman empire, is taken as evidence of the “decline of the epigraphic habit.” But while there was certainly a decline in the production of stone-cut inscriptions, it is possible that there was also

³⁹ Bischoff 1974.

⁴⁰ Everett 2003, 14, 35.

⁴¹ *CIL* XI, 1–69.

a shift from carved to painted inscriptions.⁴² We can see this in the evidence from Agnellus, who records a total of 29 inscriptions, mainly church dedications or epitaphs. Of these, only one of the epitaphs has survived: the stone-cut epitaph of Archbishop Agnellus, who died in 570.⁴³ However, Agnellus also reports six other epitaphs, fairly evenly spaced throughout the 7th and 8th centuries.⁴⁴ All of the epitaphs, including Archbishop Agnellus', are described as being "over" (*super*) his body or over the tomb; only Archbishop Agnellus' is specifically described as "with letters written in marble". It should also be noted that another is reported as being destroyed (*deletum*), and he says of another "I could not see it clearly".⁴⁵ Given the lack of stone fragments for most of these epitaphs, it is likely that they were painted on the walls above the tombs. Agnellus, of course, is reporting only epitaphs of bishops, but I think it possible that other people also had epitaphs painted on or above their tombs; and we might also think of the famous epitaph of Droctulf from around the year 600, reported by Paul the Deacon and in various syllogae, but also now lost. We should finally consider that some of the early inscriptions reported by Agnellus were made of mosaic.

The 5th and 6th centuries were certainly a great age of poetic epitaphs and dedicatory inscriptions, from Rome to Gaul. As Michael Roberts has said about the poems of Venantius Fortunatus, the ornate style of these praise-poems is "what we would expect when literary expertise becomes a mark of cultural status."⁴⁶ Venantius was educated in Ravenna in the years before 566, and thus at the absolute boom time for such inscriptions. From Ravenna in the 5th and 6th centuries we do not have any poetic epitaphs, but, thanks to Agnellus, we do have several examples of poems set up in churches, either as dedications or accompanying pictures. Not only do these follow a trend that is well-known in this period from places like Rome and Tours, but in one case, in the Orthodox baptistery, the dedicatory poem begins with the same line as one set up in San Pietro in Vincoli by Pope Sixtus III (432–40).⁴⁷ Thus, through these inscriptions, the bishops of Ravenna were participating in a wider social sphere, in which writing and displaying such inscriptions was, as Roberts describes, a mark of cultural status.

⁴² See, e.g., Kulikowski 2004, 34.

⁴³ *LPRa*, 92 (*Et litteris marmore exaratis epitaphium super corpus eius sic inuenies*); *CIL* XI. 305.

⁴⁴ *LPRa*, 103 (*Et est ibi epithaphium exaratum ita*), 114 (*Epitaphium uero desuper inuenies scriptum continentem ita*), 134 (*Epitaphium inuenies super sepulchrum eius continentem ita*), 150 (*Epitaphiumque ipsius inuenies abens continentes ita*), 153 (*Epitaphium inuenies super eum continentem ita*), and 163 (*Epitaphium super sepulchrum eius inuenietis exaratum*). The latter two are missing from the surviving *LPRa* manuscripts, but from the way that Agnellus introduces them it seems clear that he had originally copied them into the text.

⁴⁵ *LPRa*, 116 (*Epitaphium ipsius deletum est*), 124 (*Epitaphium uero eius clare legere non potui*, – although that is the epitaph of the wicked archbishop Theodore, so perhaps he simply didn't want to report it).

⁴⁶ Roberts 2009, 7.

⁴⁷ see De Rossi, *Inscr. Christ.* I.2, 110.

Ravenna's poetic dedicatory inscriptions reached their height during the reign of Archbishop Maximian (546–557), who set up both poetic and prose inscriptions in his many buildings. They continued until around the year 600, when both the dedicatory inscriptions and the major new buildings come to an end. But it was at precisely that moment that a new format appeared for poetic display, namely in the epitaphs of bishops. Before 570, as far as we know, bishops were commemorated by short epitaphs recording their name, rank, and perhaps a date.⁴⁸ The first of the poetic epitaphs that has been reported is of Archbishop Agnellus, who died in 570, as we have seen; he was followed by John II “the Roman”, who died in 595 and whose epitaph is reported by Rossi as having existed in San Severo.⁴⁹

Through these monuments, Ravenna's ecclesiastical elite were participating in a wider cultural trend. Nor were the epitaphs only for bishops; the lengthy epitaph of Droctulf commemorated a military general (d. c. 600), the epitaph of Isaac (in Latin and Greek) celebrated an exarch (d. 643), another is for an unknown *minister* named Sergius, and yet another for Peter a notary of the church (d. 571). And, we have seen, the epitaphs in Agnellus continued until the late 8th century. Thus, a very public form of writing, in which elaborate language was featured, survived as a form of public display with commemorative functions, even after other cultural forms had changed. Not only that, but we continue to see these epitaphs responding to each other. If Agnellus is correct, the epitaph of Damianus, made in 708, is a direct copy, except for a few lines, of the one made for Marinianus in 606.⁵⁰ In this, as I have been trying to demonstrate, we see a response to an inscription, in the form of its imitation, indicating that these things were not just happening, but were being made deliberately to evoke a cultural continuity.

There are two inscriptions with which I would like to conclude, because they bring us full-circle, back to the papyri and the manuscripts. The first is the inscription that survives in Sant'Apollinare in Classe, that is essentially a sculpted version of a document that records a donation of property to the church by Archbishop John V in the year 731. Why was this one Ravennate donation memorialized in stone? We cannot know, although other similar examples are known from Rome and other places in Italy.⁵¹ Was papyrus felt to be too fragile a medium for an important donation? Or did John simply feel the need to turn a private document into a public statement of his piety? Whatever the case, this particular inscription, in the 8th century, demonstrates an interplay between a culture that required written documentation of property transfers and one that expected inscriptions in buildings.

⁴⁸ E.g. *CIL* XI.363, of Exuperantius (d. 477; although actually this inscription cannot date to Exuperantius' actual death because he is called in it an archbishop, a title that was not used until the 540s) and *CIL* XI.364, of John I (d. 494).

⁴⁹ *CIL* XI.301.

⁵⁰ *LPRa*, chs. 103 and 134.

⁵¹ See Mai 1831, ch. 3.

We see a different sort of interplay on the inscription that is the most remarkable in every way, the one that was set up in honor of Archbishop Maurus, who died in 671.⁵² It is a *cento* poem, that is, a poem made up of lines from three different poem collections by Prudentius and Ausonius.⁵³ Ausonius himself wrote epitaphs and cento poems and laid down rules for them in his *Cento nuptialis*.⁵⁴ Surely the author of Maurus' epitaph knew this, and thus the epitaph contains wonderful layers of meaning. What it shows us is that, in the late 7th century, the author of this epitaph was reading and reacting to books of late antique poetry to which he had access, and was applying his appreciation of poetry to create a new form for his own day, one that, like John V's inscription, would not be private but public. Should we assume that there was an audience that got the joke?

Dennis Trout has observed that "Over the course of several centuries, monumental writing remained prominent among the strategies by which late antique communities reestablished their corporate identities in a world of religious and social change."⁵⁵ The written forms that were developed at Ravenna in the 5th and 6th centuries survived the political, economic, and cultural changes of the succeeding centuries, and by doing so, helped to forge a cultural identity for later Ravennate citizens. And because of this cultural identity, the craft of writing survived and even thrived in late antique and Byzantine Ravenna.

Bibliography

Primary sources

- Agnellus Ravennatis, *De Sectis*, Agnellus of Ravenna, *Lectures on Galen's "De Sectis"*, edidit Leendert G. Westernink, Buffalo 1981.
- Agnellus Ravennatis, *De pulsibus ad tirones*, Agnellus de Ravenne, *Lectures galéniques: le «De pulsibus ad tirones»*, introduction, texte latin (adiuvante Ivan Garofalo), traduction française, notes explicatives, bibliographie et index par Nicoletta Palmieri («Mémoires XXVIII du Centre Jean Palerne»). Sant'Étienne 2005.
- Rabotti, Giuseppe. 1985. *Breviarium Ecclesiae Ravennatis (Codice Bavaro), secoli VII–X* (Fonti per la Storia d'Italia, 110). Roma.
- Tjäder, Jan-Olof. 1954–1982. *Die nichtliterarischen lateinischen papyri Italiens aus der zeit 445–700*, 3 vols. Lund.

⁵² *LPRa*, 114.

⁵³ See Deliyannis 2006, 285–286.

⁵⁴ Ausonius, Book 17, "A nuptial cento", introduction; Prudentius, too, was cento-like in parts of his *Psychomachia*, see Carruthers 1998, 58–59.

⁵⁵ Trout 2009, 184.

Secondary sources

- Benericetti, Ruggero. 1995. *Il Cristo nei Sermoni di S. Pier Crisologo* (Studia Ravennatensia 6). Cesena.
- Bertelli, Carlo. 1998. "The production and distribution of books in late antiquity." In *The Sixth Century: Production, Distribution, and Demand*, edited by Richard Hodges and William Bowden, 41–60. Leiden.
- Bischoff, Bernhard. 1974. Review of *Corpus Agrimensorum Romanorum. Codex Arcerianus A der Herzog-August-Bibliothek zu Wolfenbüttel (Cod. Guelf. 36. 23 A)* edited by Hans Butzmann. *Gnomon* 46: 563–569.
- Brown, T.S. 1984. *Gentlemen and Officers. Imperial Administration and Aristocratic Power in Byzantine Italy A.D. 554–800*. Hertford.
- Campana, Augusto. 1958. "Il codice ravennate di S. Ambrogio." *Italia medioevale e umanistica* 1: 15–64.
- Carruthers, Mary. 1998. *The Craft of Thought: Meditation, Rhetoric, and the Making of Images, 400–1200*. Cambridge.
- Cavallo, Guglielmo. 1992. "La cultura scritta a Ravenna tra Antichità tarda e alto Medioevo." In *Storia di Ravenna II/2. Dall'età bizantina all'età ottoniana*, edited by A. Carile, 79–125. Venezia.
- Cavarra, Berenice. 1993. "La cultura medica a Ravenna fra VI e VII secolo". *Medicina nei Secoli* n.s. 5: 345–360.
- Deichmann, Friedrich W. 1980. "La corte dei re goti a Ravenna". *CARB* 27: 41–53.
- Deliyannis, Deborah. 2006. Introduction to *Agnelli Ravennatis Liber pontificalis ecclesiae Ravennatis (Corpus Christianorum Continuatio Mediaevalis 199)*. Turnhout.
- Deliyannis Deborah M. 2004. *Agnellus of Ravenna, The Book of Pontiffs of the Church of Ravenna*. Washington DC.
- Deliyannis Deborah M. 2009. "The *Liber pontificalis* of the Church of Ravenna and its relation with the Roman model." In *Liber, gesta, histoire: Écrire l'histoire des évêques et des papes, de l'Antiquité au XXIe siècle*, edited by François Bougard, Michel Sot, 283–297. Turnhout.
- Dillemann, Louis and Janvier, Yves. 1997. *La Cosmographie du Ravennate*. Brussels.
- Everett, Nicholas 2003. *Literacy in Lombard Italy, c. 568–774*. Cambridge.
- Everett, Nicholas. 2013. "Lay documents and archives in early medieval Spain and Italy, c. 400–700." In *Documentary Culture and the Laity in the Early Middle Ages*, edited by Matthew Innes, Warren Brown, Marios Costambeys, 63–94. Cambridge.
- Fox, Allison. 2012. *Burial and Resurrection: The Sculpted Sarcophagi of Ravenna and Visions of Perpetuity in an Age of Flux*, PhD. thesis, Chapel Hill.
- Frampton, Michael. 2008. *Voluntary Animal Motion from Greek Antiquity to the Latin Middle Ages, 400 BC-AD 1300*, PhD thesis, University of Chicago.
- Kulikowski, Michael. 2004. *Late Roman Spain and Its Cities*. Baltimore.
- Lii, Ding-Tzann. 1998. "Social Spheres and Public Life: A Structural Origin." *Theory, Culture & Society* 15: 115–135.
- Mai, Angelo. 1831. *Scriptorum veterum nova collectio e vaticani codicibus*, 5. Roma.
- Marini, Gaetano, ed. 1805. *I papiri diplomatici raccolti ed illustrati*. Roma.
- Momigliano, Arnaldo. 1955. "Cassiodorus and Italian Culture of His Time." *Proceedings of the British Academy* 41: 207–245.
- Montero Cartelle, Enrique. 2005. "Los textos médicos de Ravenna." *Ravenna da capitale imperiale a capitale esarcale*, 801–820. Spoleto.
- Munkhammar, Lars. 2011. *The Silver Bible: Origins and History of the Codex Argenteus*. Uppsala.

- Musitelli, Sergio, Marandola, Paolo, Jallous, Hussein, Speroni Alberto and de Bastioni, Tomaso. 1994 "The Medical School at Ravenna", *American Journal of Nephrology*: 317–319.
- Orioli, Giorgio. 1980. "Il catalogo episcopale Agnelliano e i vescovi di Ravenna nel V secolo." *Bollettino della Badia Greca di Grottaferrata* 34: 135–144.
- Palmieri, Nicoletti. 2001. "Nouvelles remarques sur les commentaires à Galien d l'école médicale de Ravenne." In *Docente natura: mélanges de médecine ancienne médiévale offerts à Guy Sabbah*, edited by Bernard Jacquinod, 209–246. Saint-Étienne.
- Pietri, Charles. 1983. "Les aristocraties de Ravenna (Ve-VIe siècles).", *Studi Romagnoli* 34: 643–673.
- Polara, Giovanni. 1995. "Letteratura in Italia nell'età di Teoderico." In *Teoderico e i Goti fra Oriente e Occidente*, edited by A. Carile, 353–366. Ravenna.
- Radiciotti, Paolo. 2002. "Codici latini di ambiente ostrogoto: nuove osservazioni paleografiche." *Ravenna, Studi e ricerche* 9.1: 189–207.
- Riché, Pierre. 1976. *Education and Culture in the Barbarian West, Sixth through Eighth Centuries*. Columbia.
- Riddle, John M. 1981. "Pseudo-Dioscorides' *Ex herbis feminis* and Early Medieval Medical Botany." *Journal of the History of Biology* 14: 43–81.
- Roberts, Michael. J. 2009. *The Humblest Sparrow: the Poetry of Venantius Fortunatus*. Ann Arbor.
- Rosenthal, Erwin. 1972, *The Illuminations of the Vergilius Romanus (cod. Vat. Lat. 3867): A Stylistic and Iconographical Analysis*. Dietikon/Zürich.
- Staab, Franz. 1976. "Ostrogothic Geographers at the Court of Theoderic the Great: A Study of Some Sources of the Anonymous Cosmographer of Ravenna." *Viator: Medieval and Renaissance Studies* 7: 27–58.
- Tjäder, Jan-Olof. 1972. "Der Codex argenteus in Uppsala und der Buchmeister Viliaric in Ravenna." In *Studia Gotica: Die eisenzeitlichen Verbindungen zwischen Schweden und Südosteuropa, Vorträge beim Gotensymposium im Statens Historiska Museum Stockholm 1970*, edited by Ulf E. Hagberg, 144–164. Stockholm.
- Trout, Dennis. E. 2009. "Inscribing identity: the Latin epigraphic habit in late antiquity." In *A Companion to Late Antiquity*, edited by Philp Rousseau, 170–186. Chichester/Malden.
- Vasina, Augusto, ed. 1985. *Ricerche e studi sul Breviarium Ecclesiae Ravennatis*. Roma.
- Wright, David H. 1992. *Codicological Notes on the Vergilius Romanus*. Vatican City.
- Wright, David H. 2001. *The Roman Vergil and the Origins of Medieval Book Design*. London.

Debora Ferreri

8 Grave Goods and Burial Typologies: Funerary Customs in Ravenna

Abstract: The transformation and development of burial rites between the 4th and the 8th centuries were not uniform and there were various intermediate stages according to different towns and the variability of the archaeological record. This paper analyses a sample of Ravenna and its territory focusing on the practice of laying object with the dead, the presence of grave goods inside tombs and their ritual significance, as well as the types of burials and the concept of funerary space used within the new imperial see.

The archaeological excavation and new research of the basilica and monastery of San Severo and the port area at Classe offer a lot of knowledge for understanding funerary practice and the relationship between the space of the living and the space of the dead in Late Antiquity and at the beginnings of the Middle Ages.

From the 5th century the relationship between the living and the dead changes. The spaces of the living and the dead were not separated but united in the everyday sphere as interactive categories, also in Ravenna and its territory. The location of the burials is founded on the belief that the spaces within which funeral ritual and burials took place had an important effect on their form and experienced meaning, and that, reciprocally, ritual uses produced or constituted urban spaces. Death is part of everyday life, and the burials are close to homes. This change in the management of the urban spaces reflects a new cultural and social concept. The intramural burials may yield important evidence on urban religion, ritual, social change organization and topography.¹

The development of burials rites between the 4th and 8th centuries was not uniform and there were various intermediate stages according to different towns and the variability of the archaeological record. During the course of the 3rd century, cremation in the Roman Empire began to be progressively replaced by inhumation. It was not until the end of the 8th century that cremation was explicitly condemned. The types and shape of burials change, but the transformations depend on different regions. Some Roman burial typologies continued, like *cappuccina*, sarcophagi and *enchytrismos*, and new ones appeared. From the late 5th century the use of funerary inscriptions begins to recede but does not disappear completely.² The early medieval

¹ Cantino Wataghin 1999, 147–180; Cantino Wataghin/Lambert, 1998, 89–114; Karkov/Wickham-Crowley/ Young 1999.

² De Rubeis 2007, 387–400.

society looked to the Roman World for how to care for their dead and in the choice of grave types. However, this was sensitive to cultural influences and traditions related to the histories of the different regions of our country.³ Burial rites provided families with an opportunity to display not only their religious devotion but also their wealth.⁴

At Ravenna during Roman period, the necropolis was placed along the coastline, the sandy strip that separated the town from the sea, and along the access roads. Most of the cemeteries were placed near the main roads that connected Ravenna with the surrounding area, both to the north and towards the south, in Caesarea and Classe. The landscape was characterized by the presence of water; the funerary areas were often separated by funerary enclosures or divided from each other by ditches, embankments, lanes and wooden fences, but no masonry (Fig. 1).⁵

Between the 3rd and the 4th century these necropolises continued to be used, which consequently is interesting from an intensification of funeral activities; contemporarily, new areas were destined for cemetery use following the development of the city. During the 5th century, Ravenna was transformed with the construction of the wall, causing the urban spaces to be redefined.⁶ Some Roman cemeteries remained outside of the city, but very close to it and continue to be used, although through new dynamics. Ravenna's oldest necropolis, located around the town, continue to be used. In this period, we find different rituals, inhumation and cremation.⁷ Later, the construction of the great basilicas in Ravennate necropolises contexts, like Sant'Apollinare in Classe and San Severo, related to the cult of the martyrs, produce a big change: these funeral areas were turned into meeting places, not only for individuals and families but also for large part of the urban community.⁸ In addition, the presence of tombs of saints and bishops inside cemeteries constituted an attraction for the burials. These buildings inside the settlement further conditioned the distribution of burials in the urban space, a practice absent in the Roman world.⁹ The cemetery behind the apse of the church of San Giovanni Evangelista, one of the most important funeral areas of Ravenna used from the 1st century BC until the 6th century AD, after the completion of the wall, was inside the urban circuit.¹⁰ The first

³ Giuntella 1998, 64.

⁴ Effros 2002.

⁵ Berti, Ortalli 2000, 213.

⁶ Christie/Gibson, 1988; Gelichi 2005, 821–840; Cirelli 2008, 54–67. For Ravenna in Late Antiquity and Middle Ages see: Cirelli 2008; Augenti 2010.

⁷ About the necropolis at Ravenna and Classe: Maioli 1986, 159–161; Maioli 1998, 315–357; Maioli 1989, 227–252; Maioli 1990, 375–414; Maioli 1991, 252–280; Maioli 1992, 497–520; Maioli/Stopponi 1987; Lasi 2002, 141–152; Leoni/ Maioli/Montevecchi 2008; Ferreri 2009.

⁸ About recent excavation on San Severo see: Augenti 2006; Augenti/Bertelli 2006; Augenti/Begnozzi/Bondi/Cirelli/Ferreri/Malaguti/Scozzari 2012, 238–245.

⁹ See, for instance, Effros 1997, 1–23; Spain 1999, 39–60.

¹⁰ Bermond Montanari 1975; Leoni/Maioli/Montevecchi 2008.

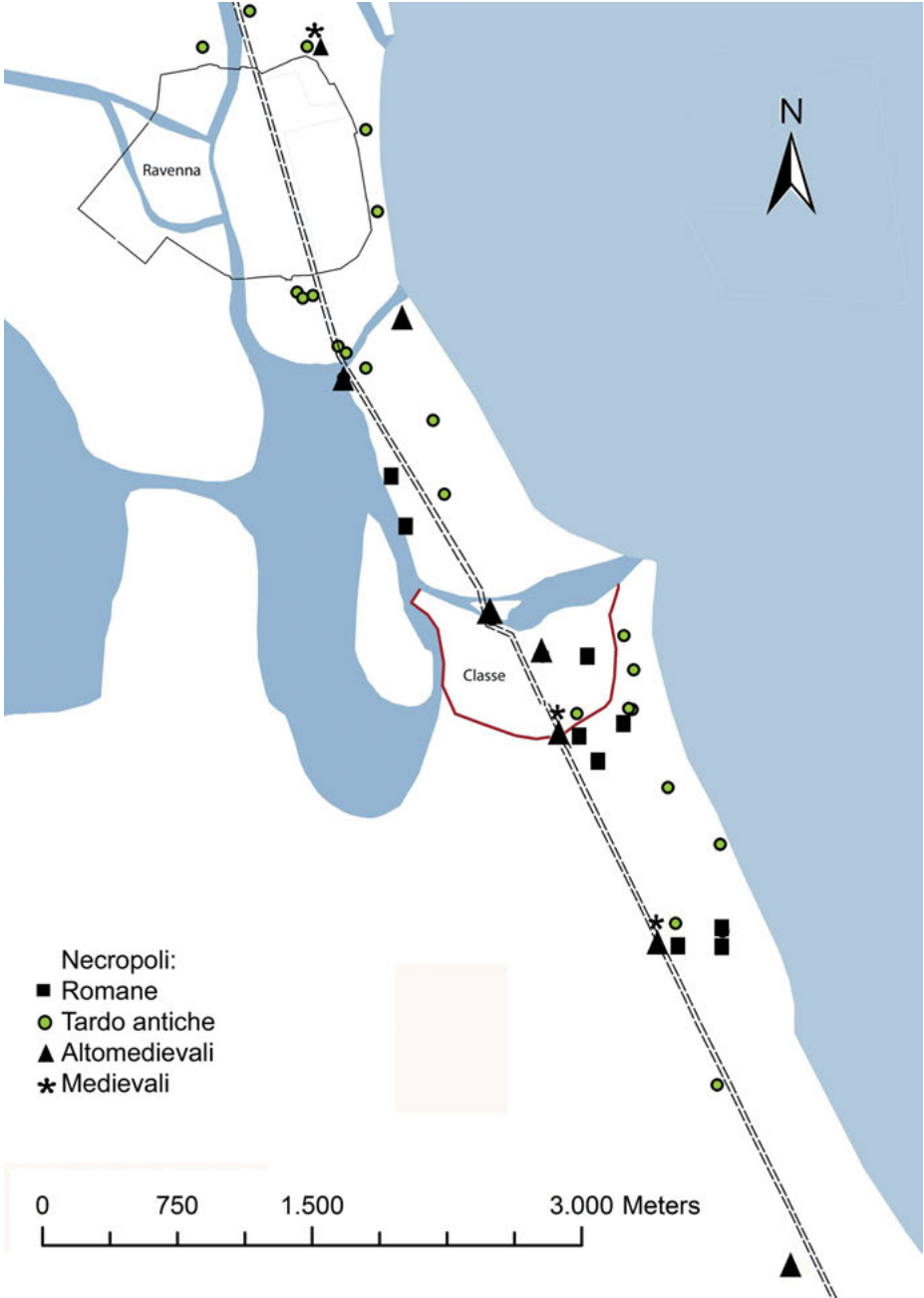


Fig. 1: Ravenna and Classe: necropolis and funerary areas from the Roman period to the Middle Ages (map by the author).

urban burials within the city of Ravenna are considered “privileged”, associated with church buildings, like Basilica Apostolorum, Sant’Agata Maggiore, Sant’Agnese and S. Croce, the local storage places are buried characters that have played a special role in local political history.¹¹ In the urban space, burials are inserted in open areas, in ruinous structures, or abandoned houses and buildings, independent of any adjacent religious building. Sometimes they occur at abandoned *domus*, like in via D’Azeglio or in via Pier Traversari. The dead are related to people still working and living in other parts of structures.¹²

The transformation of grave goods should also be noted. The presence, or absence, of grave goods in a funeral context is a very complex issue. The association of different object in graves might be related to the desire to preserve and transmit a certain memory of the dead. Grave goods inside the burials of the majority of Ravenna’s necropolises contained simpler artifacts like combs, buckles, pots and so on. The practice of laying objects with the dead is attested from ancient times and continues in Roman times. Changes in different forms and practices appear in Late Antiquity, also depending on the areas and societies. However, in the 5th to 7th/8th centuries, the grave-goods custom was hardly ever uniform, and even where grave goods were not the norm, some burials were singled out for depositions. Objects found in early medieval graves include a wide variety of artefacts, but occur as regionally distinct, gender-differentiated kits. Between the 4th and 7th centuries graves contained few grave goods. These were usually small objects from everyday life, but in some graves wealthy and articulated grave goods were also found, like weapons or jewellery; items that, in addition to the wealth of these objects, show the clear presence of clothed deceased. Some objects refer instead to a symbolic meaning, which interpretations often become multiple and different. This is the case of faunal elements such as animal teeth, eggs, ceramic spindles whorls, which are considered kinds of amulets and lucky charms. Later, from the mid-7th century, the presence of the grave goods inside tombs is increasingly scarce, although in some, and even later in the Middle Ages, many objects were found that are usually attributed to elements of clothing such as buttons, buckles, belt elements.¹³

The custom of depositing grave goods disappeared from the various regions of Europe at different times and for different reasons. While this disappearance often coincided with the spread of Christianity, it is by no means certain that Christianity was actually the cause of its disappearance in every single case. Where grave goods were discontinued, they did not normally disappear suddenly, but gradually and with social differences. Such a causal connection is widely assumed in the case of Anglo-Saxon England where the spread of Christianity during the 7th century coincided with a

¹¹ Ferreri 2014.

¹² Christie 2008, 254.

¹³ Halsall 1995a; Halsall 1995b; Halsall 2010; Lucy 2000.

gradual decline in the provision of grave goods, which were finally phased out early in the 8th century.¹⁴ On the other hand, grave goods continued among the Franks and in Greater Moravia for up to two centuries after Christianization.¹⁵ Some grave goods, thus, would likely have served as material reminders of events in the life of the deceased. Roman funeral processions included representations and objects which gave an account of the deceased's life and achievements.¹⁶ Grave goods may also be metaphors of the origins of people; this would explain the early medieval phenomenon of 'burials out of place' – individuals buried with items which belong to different regions or countries. For some, the disappearance of the objects inside tombs is seen as an act of the Church and the consequence of Christianity, although there is no explicit prohibition of these practices. From the 8th century, moreover, the use of donations *pro anima* (goods were donated to the Church or to the relatives of the deceased), spreads. This practice served to strengthen family ties but above as a way of holding onto one's heritage.¹⁷ The Church never condemned the deposition of grave goods. The progressive disappearance of grave goods was a phenomenon of the period, but is also associated with more pragmatic reasons, such as not removing precious metals or useful objects from circulation.¹⁸

Objects inside funerary contexts has sparked archaeologist's interests and debates, often based on different approaches.¹⁹ The analysis of objects buried with the dead, in fact, offers a wide variety of information. First is information about typology and classification of materials, which in addition to providing historical information, indicate cultural, social and economic data. This is relevant to understanding the ritual significance of the grave goods and the role in funeral celebrations. The analysis of grave goods with the characteristics of the burial, the disposition of the body inside the coffin, and information about age and gender of the deceased, could help us understand social organization and its internal societal changes.²⁰ To analyze the changes in funeral customs, identify regional identity and the differences between groups of individuals, or social groups and *status*, it may be useful to identify the types of burials with chronological variants, especially for cemetery contexts used for a long period. The construction of *chrono-typological* sequences, however, could result in numerous methodological problems, especially if the researches are based on partial archaeological data/studies and want to use this type of analysis to date individual graves or cemeteries contexts. In these cases, there is the risk of an overly-detailed typology, which does not include the dynamics of the whole cemetery.

¹⁴ See discussion in: Geake 1992, 83–94; Geake 1997; Williams, 2010b, 26–37.

¹⁵ Gimbutas, 1971, 142.

¹⁶ Hesberg 1998, 23.

¹⁷ La Rocca 1993.

¹⁸ Dierkens/Périn 1997, 82; Fevrier 1987; Rebillard 1994.

¹⁹ La Rocca 2007; Barbiera 2005.

²⁰ Halsall 1995a; 1995b; 2010.

Space and position of the graves in the cemeteries might have been employed to emphasize social relations.

The archaeological literature does not provide many details about grave goods in Ravenna's burials. In many cases there are not informations about material culture or human remains, but just archaeological partial data. For this reason, the territory of Classe could offer a lot of knowledge for understanding funerary practice in Ravenna. The excavations and research of the basilica and monastery of San Severo and the port area at Classe are already being carried out according to this perspective. Archaeological evidences can be used for understanding funerary practices between the Roman Age, through Late Antiquity to the Middle Ages, in continuous along the complex life of the city and the ecclesiastical building. From the 7th century this area of the city was interested by some structural and topographic transformations that changed the concept of space, allowing the coming of the burials in living contexts, dynamics similar to many other cities in Italy and Europe. In this area the burials were found in warehouses, in correspondence of the walls of these buildings that in some case changed the use. The presence of these burials inside the warehouse testifies to an important transformation of the use of these areas between 6th and 7th century.²¹ In some of these building, for example, were found news groups of houses and craft activities.²²

Pendants, Earrings, Bracelets and Other Finds

In the port area of Classe elements of pendants were found inside four graves. Other objects, as some dress fitting, including foot of a stirrup brooch, belt buckle types, rings, have been found in other contexts, such as in the same port area and inside the complex of San Severo, but are not associated with burials.²³ A female burial, inside building n. 9 of Classe's port area had a faint amethyst placed over the chest. More significant, however, is burial 29, which is also placed in building nr. 9. It is a burial of a child of about 2–3 years. A small necklace was around her neck composed of colored glass paste and a bronze element (Fig. 2). Some necklace beads were also present inside burials 1 and 3 found in the building nr. 14. The latter burial belongs to an infant, at maximum of 5 months of age, laid in an earth grave with east-west orientation, within the interior of a despoliation of the pit perimeter building structures 14. Besides the presence of some necklace beads, an unreadable coin was found inside the tomb, as well as a small achromatic ceramic jug

²¹ About the archaeological research in this area see: Augenti 2005; Malnati/Sassatelli/Augenti/Maioli 2007; Augenti/Cirelli 2010.

²² Ferreri 2014.

²³ About the location of burial inside the port area of Classe see: Ferreri 2009, Ferreri 2011.

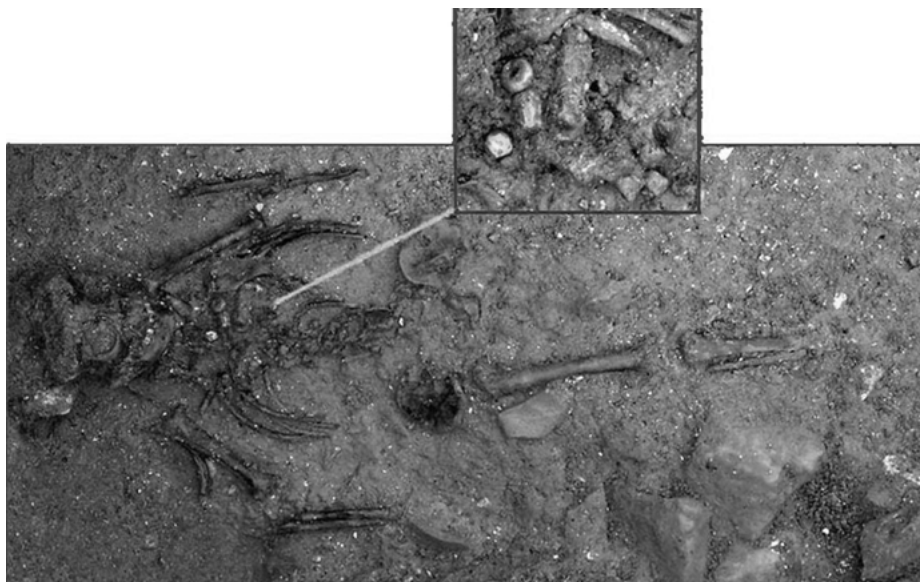


Fig. 2: Infant burial with small necklace (Classe, burial 29) (photo by the author).

dating from the second half of the 8th century. The latter has a small and a nozzle positioned on the opposite side. On the surface are visible traces of coloring. In other funerary context similar containers were found inside infant burials; some have been recognized as baby bottles (Fig. 3 and 4).²⁴

The same functions amulet and ornament had the *bulla*, a pendant of Etruscan origin in spherical or conical shape, used as a good luck charm by the children of noble origin and then became part of grave goods most used and common.²⁵ A bubble in gold was found in a tomb, dated between third and 4th centuries A.D., in the necropolis of Marabina in Classe.²⁶ Originate from the same necropolis other small items of jewellery as an earring, found in a tomb reused in the second half of the 4th century A.D., which would generate an average bronze of Marcus Aurelius and two small coins of Constantius II.²⁷

In regards to jewels, they are present only sporadically. Some scholars say this is probably due to the richest tombs being violated in ancient times or suggest the presence of rich privileged cemeteries not identified.²⁸ It is also possible that local customs were such as to have few objects in the tombs. From the necropolis of the

²⁴ Schwindenhammer 2009, 77.

²⁵ Minguzzi 1983, 196–199.

²⁶ Minguzzi 1983, 190 ill. 18.6.

²⁷ Minguzzi 1983, 198.

²⁸ Maioli 1990b, 451.



Fig. 3: Infant burial with coins and *brocchetta* (Classe, burial from building 14) (photo by the author).

Ponte Nuovo in Ravenna comes an earring of gold and garnets with teardrop pendant, created sometime between the 2nd and 4th centuries.²⁹ From the same necropolis a necklace attachment dated between the 2nd and 3rd centuries was found. Here a necklace with glass pearls and a crescent moon pendant in gold was found in a mass grave, which dated between the 2nd and the 3rd centuries. This type of object with apotropaic value endures until the Middle Ages.

Among the jewels, space deserves the pendant found at the necropolis of Darsena, in the cemetery near the city of Ravenna, between the outer zone of the apse of San Giovanni Evangelista and Theoderic's mausoleum. In this area, just outside the city walls, some burials and the famous "Theoderic Corazza" were found.³⁰

In the urban area, specifically inside the Basilica Apostolorum (today's San Francesco) below the front wall of the crypt, a tomb was found with a kit consisting

²⁹ Maioli 1990b, 448.

³⁰ Minguzzi 1983, 199 ill.18.7; Baldini Lippolis 2007, 134–147; Bierbrauer 1994.



Fig. 4: *Brocchetta* from infant burial (photo by the author).

of a gold bracelet, some necklace beads and a medal. The object known as the “Gioiello di S. Francesco” can be dated between the late 6th and 7th centuries.³¹ Also associated with some burials are engraved gems and amber, some used for the making of rings.³² An amber ring with a female bust comes from the graves behind the apse of San Severo.³³ This is a smooth ring, but with the casing to the setting formed by a colored stone, which comes from the necropolis of Podere Giorgioni.³⁴

A conical agate with Fortuna Abundance dated between 2nd and 3rd centuries comes from San Severo.³⁵ A bronze signet ring with carnelian engraved with chrismon and fish is also found here, which dates back at least to the 4th century or perhaps the 5th century (Fig. 5).³⁶ Amber and coral had precious value but also a magical and propitiatory significance, already known in the ancient world. In some cases the glass production scaps have an apotropaic value.³⁷ Many of the gestures

³¹ Baldini Lippolis 2004.

³² Minguzzi 1983, 200–201.

³³ Maioli 1990b, 450–451. A similar ring comes also from the necropolis of Voghenza.

³⁴ Maioli 1990a, 398 ill.20/2.

³⁵ Bermond Montanari 1968, 29–30; Maioli 1990b, 451; Baldini 2007.

³⁶ Maioli 1990b, 452 ill. 65; Bermond Montanari 1968, 28.

³⁷ Martorelli 1986, 166–167.



Fig. 5: Rings from the basilica of San Severo (photo by the author).

that accompanied death in the Roman world continue to be used, probably with the desire not to interrupt a tradition of reassuring a well-known ritual.

Some objects disseminated in most ancient tombs disappear, like lamps and toilet bottles. In the area of Ravenna until the 3rd century, lamps are among the items most present in the necropolis of Classe, along with glass balsam.³⁸ Toilet bottles are traditionally attested in Classe burials, and in some cases with special shapes and colors. In one of the graves behind the apse of San Severo, a small oil lamp in the shape of a shell was found³⁹; a specimen similar to those found in the necropolis of Marabina and the necropolis of Vasche dello Zuccherificio. Other types of toilet bottles came from necropolis of Palazzette.⁴⁰

Coins

Coins have been found in several graves, generally near the head or in the hand of the deceased, presumably based on the customs of paying an obol to Charon. The

³⁸ Maioli 1990b, 437. For the toilet bottles in Ravenna and Classe see: Montevocchi 2010, 167–171.

³⁹ Maioli, 400 ill. 122/2.

⁴⁰ Maioli 1990b, 439.

ancient tradition of depositing coins in burials continued into the late Middle Ages, although its occurrence is relatively rare. Coins appear as amulets in brooches from the 11th century and may have been included with medieval burials for their apotropaic value. Single coins of silver were sometimes deposited in or near the mouth or eyes. Cases where two coins were placed near the mouth or shoulders of the body or where coins were bent before being placed in the grave, indicate distinctive rites. Magic amulets often took the form of circles, including birth-girdles, rings, seals, coins, discs and badges.⁴¹

Coins are also found in graves of the Early Middle Ages, but not in the mouths of the dead; it is therefore uncertain if they were intended as payment during the journey, although this may well have been the intention of coins placed in a hand of the corpse. Only some objects can ever have been meant as an obulus, and they should be identifiable by their standard deposition or uniform distribution. At the same time, the case of Charon's Penny highlights that there may have been, in the concepts of some societies, a distinction between goods specifically for the journey and goods meant for use in the afterlife. The coins inside the tombs may have a different function, also with respect to their original use and present in circulation at the time of deposition. They can become pendants or amulets after having been drilled and placed on the deceased as a pendant. In other cases, instead, they are replaced by other objects, such as simple metal discs.⁴² The material with which were usually made and the round shape gave a magical-religious significance to these objects. It was common belief that evil spirits could not get into circular objects.⁴³ Their presence, therefore, together with talismanic connotation, also served to guard the tombs from evil spirits, but also by grave robbers.⁴⁴ The deposition of coins associated with burials is not an indicator of social status; they are in fact attested in tombs of all kinds. Moreover, it must be added that their presence as a kit is neither a rule nor a widespread practice. The graves containing coins represent, in general, very low percentages in the context of an entire necropolis.⁴⁵ The use of lay in the tomb coins, unsystematic in the ancient world, continued with the same irregularities in the Middle Ages and beyond.⁴⁶ In the suburbs of Rome, for example, of about 335 burials studied, only 61 had within them a coin lying independently.⁴⁷ Inside the tombs the coins are often found at the head of the deceased, or close to the chest, probably placed inside apparel; more rarely in the lower limbs, in the hands of the deceased. In many contexts, however, they are found within the

⁴¹ Gilchrist 2008.

⁴² Arslan 2010; Stevens 1991.

⁴³ Perassi 2001, 102.

⁴⁴ La Rocca 1988.

⁴⁵ Travaini 2007, 259.

⁴⁶ Peduto 1995; D'Angela 1995 and bibliography.

⁴⁷ Ceci 2001.

burial filling. Probably in these cases they are evidence of a gesture, a kind of good wish at the end of the funeral ceremony to give evidence of the coins in the very act of burial. Although the laying of kits inside the tomb was abandoned between the late 7th and 8th centuries, the coins continue to be found, both in tombs of the wealthy and in the tombs of ordinary people. There are, in fact, sometimes small coins of low value. Old Roman coins are found in many medieval tombs, a sign of a ritual use.⁴⁸ Coins inside the tombs of saints deserve a separate discussion. Usually the coins found in these tombs are dated to a period close to that of the transfer or recognition. In Milan, in the tomb of St. Ambrose, who died in 397, coins of little value were deposited. After about a century, an observation of the burial took place on which occasion other currencies of little value were placed. Their presence probably was intended to create a link between life and death, between human and divine.⁴⁹ In the tombs of the popes, however, coins were laid that were issued during their pontificate.⁵⁰ In some cases, the graves of the saints were accessible to the devotees and faithful, who threw coins as offerings or to create a link with the saint. The pilgrims on their travels brought with them money that was often left at the altar as a gift or at the grave of the saint once they had reached their destination. Leaving their money was part of the rite.⁵¹ Inside the mausoleum of Saint Rufillo, the chapel where the bishop Severus was originally buried, within the imposing church complex a consistent amount of coins has been found over the floor and inside the burials. These were often small and unreadable similar to practices also found at Classe. Also some coins were placed within the most important tomb (Burial 162), the one for which the chapel was built – located at the center of the apse (Fig. 6). Two coins were placed above the feet of the deceased, along with a shell; another coin was placed behind the skull.

The literature does not provide many details about this practice in Ravenna. A Justinianic coin was found inside the tomb in the north portico of the Basilica of Santa Croce.⁵² Inside a sarcophagus in the porticus of S. Agata Maggiore, a coin of Heraclius or Constans II was found. In the area of Sant'Apollinare basilica, a considerable amount of small coins dated from the 4th to the 6th century were found. They have been interpreted as testimony to numerous offers from the faithful on the occasion of their attendance of the place of worship or during burial.⁵³

Most of them is attested in the port area; of a sample of 50 found burials, 34 were devoid of coins while 16 had one or more coins. However, money was found inside the mouth of the deceased, recalling Charon's obol (burial 33) in one case. In

⁴⁸ This is the case, for instance, of some burials of Castel Trosino and Nocera Umbra.

⁴⁹ Travaini 2007. About coins inside saints burials Travaini 2004 and bibliography.

⁵⁰ Geary 2000.

⁵¹ Travaini 2007, 269.

⁵² Cirelli 2007; Gelichi 1990.

⁵³ Morelli 2003, 552–565; Morelli 1999.



Fig. 6: Burial at the centre of the apse (San Severo: *mausoleum* of San Ruffillo)
(photo by the author).

San Severo, however, the evidence of depositing the coins inside the burials is poor. Of about 200 tombs that have been found, only 7 had coins inside them that can be associated to the deceased. The chronology of these coins is between the 4th and the 11th centuries.⁵⁴ According to a study of necropolises in North Italy, coin depositions decrease from a rate of 45% in the period between the late 3rd and 4th centuries to 17% from the 5th to the mid-6th century; and then became sporadic certificates of coins used as such and not as jewellery.⁵⁵ The transformation of the ritual outfit appears to be tied to a gradual abandonment of ritual elements for greater proportions of the deceased's personal equipment (jewellery, clothing, weapons, tools). These types of objects, belonging to the sphere of personal cleanliness, are found in many tombs of Ravenna, especially in Classe's necropolis. Evidence of imperial era objects also continues to be present during the Late Antiquity. Most of them are objects in bone, such as pins, needles, but also machine lathed boxes (burial 29 from Giorgioni) and mirror handles. An object made of ivory also comes from grave 29 of Podere Giorgioni, a probable flabellum shaped handle arrow and terminating in a small feline head.⁵⁶

⁵⁴ About coins from Classe: Baldi 2015.

⁵⁵ Gastaldo 1998, 21–23.

⁵⁶ Maioli 1990b.

Bone Objects: The Combs and the Knives

Between 5th and 7th century the object that occurs most within burials is the bone comb. The latter is an object of everyday use and toiletry need for both women and men. It was used to tidy up, clean hair but also to do hairstyles. Combs have been found in almost cultures and time period. They are functional, decorative and ritual objects. The role of combs in the production and manipulation of identity has previously been discussed, but it remains unclear whose identity was being expressed, to whom it was being communicated, and on whose behalf.⁵⁷ In early medieval contexts, personal use products are most frequently found, especially associated with graves dated between the 6th and 7th centuries and regardless of sex and age of the deceased. In fact, they are even found within male and female child burials. Similarly, combs have no distinction in relation to the social status of the deceased, appearing within tombs with rich grave goods but also as a unique element / object. They are, if anything, the shape, the quality of the object and its decoration to show the richness and social category of the buried. Chronologically multiple element combs begin to be produced during the late Roman Empire and were widespread in Transalpine and Mediterranean area up to the 7th century.⁵⁸ In the Danubian area they are frequent in 4th and 5th centuries cemeterial areas, especially those close to fortified centers, continuing to be produced in the Byzantine provinces of Illyria.⁵⁹

Bilateral combs in Italy are concentrated in the northern regions (in particular in Veneto and Istria), with a presence also in Puglia and Avellino's territory, as well in Corsica and Sardinia.⁶⁰ From the 4th century, but especially between the 6th and 7th centuries, evidence of combs with a double row of teeth appear. This type gradually replaces or at least exists alongside those with a single row and handle. They are variously shaped and decorated within Late Roman tradition and frequently found in Lombard burials.⁶¹ The dual row of comb teeth is shorter with a more simplified decoration, as bundles of parallel lines or intersecting, or in many cases without decoration. Over the course of time, regardless of the material used, combs do not show significant typological transformations; some changes are related to the type of decoration.⁶² Usually they consist of a handle of varying shape and decorative motif with a single or double row of teeth. The latter type seems the most common, both in

⁵⁷ Ashby 2006.

⁵⁸ Nastasi/Vay 1978, 87–96; Guidoni Guidi 1983, 192; Ahumada Silva 1990, 42–43.

⁵⁹ Bavant 1990, 238–241.

⁶⁰ Guidoni Guidi 1983, 192–195; Maioli 1984, 486; Torcellan 1986, 54; Ahumada Silva 1990, 42–43, 76, 86–87 (Cividale, Santo Stefano in Pertica); De Marchi 1991, 122, tav. LXV, ill. 61 (Monte Barro); De Marchi 1999, 330 (Brescia, S. Giulia); De Marchi/Possenti 1998, 204–205 (Monselice); De Marchi 2001, 398; Cunja 1996, 83–85 (Capodistria).

⁶¹ De Marchi/Possenti 1996, 204–205.

⁶² About combs and productions see also Giostra 2012, 274–288.

Italian territory and in trans-Alpine area, and within the Merovingian kingdom. These simple and common objects have been the subject of numerous interpretations of their meaning and the great importance of ritual expression. In some contexts, combs in tombs has been interpreted as a link between the deceased and those who mourn their loss, preparing the dead for burial. Their presence was associated precisely with this activity. The comb was definitely used in those ritual phases in which the deceased's body was washed and prepared for the funeral. The existence of these objects, as well as tweezers, pins or cosmetic brushes refer not only to the care of the body in the physical and practical sense, but also a preparation of the symbolic body, namely the passage from life to death.⁶³ The position of the combs inside the tombs was different; they could be placed at various points over the body of the deceased: near the head, in connection with their functional use, the basin, the height of the femurs, but also in the foot or by the arm.

From the point of view of materials, most of the combs were made of bone and wood,⁶⁴ but there are also specimens in ivory or metal.⁶⁵ The basis of the different material used for their implementation and the type of processing, it is possible to identify their value.⁶⁶ It is also important to remember the bond and the reference that these objects have with hair: a sign of nobility and, at times, magical powers. This strong symbolic value of hair, but also the beard, is present in many cultures and traditions, even in different historical periods. Practices regarding the treatment of hair have a relationship with many funeral ceremonies.⁶⁷ There are cultural traditions in which it is necessary to shave the hair, as a sign of mourning; in other cultures, however, it is prohibited. There are also some cases in which women leave the hair disheveled and unkept, or rip them as a sign of grief.

In some regions of late antique Italy, combs appear to be a characteristic element of funerary rituals. As in the case of Oderzo and Meizza, they constitute one of the elements most frequently found even in burials with graves limited to a few items of daily use, such as a short-bladed knife, spindle whorls, from isolated belt buckles.⁶⁸ In Oderzo, a Byzantine stronghold located between the Duchy of Friuli and the rest of the territories occupied by the Lombards, combs were found in nine graves out of a total of nineteen. They were positioned near the skull in five cases, four were instead at the pelvis.⁶⁹

⁶³ Williams 2007.

⁶⁴ About wooden comb at Classe: Maioli 1994, 110–111. Others wooden combs were found in Crecchio: Staffa/Pellegrini 1993, 55.

⁶⁵ Cecchelli 1960, 891–894.

⁶⁶ The Edict of Diocletian fixed the price for a female bone comb at 14 *denarii* maximum (Dacl 1938).

⁶⁷ Huntington, Metcalf 1983, 103.

⁶⁸ Castagna/Tirelli 1995, 124–125; Torcellan 1986, 54; De Marchi/Possenti 1998, 205.

⁶⁹ Castagna/Tirelli 1995, 124.

The presence of a comb can have both a personal value linked to everyday life and an apotropaic value linked to a conception of the head as the seat of the vital forces of the individual.⁷⁰ At Sutton Hoo, the presence of a horn comb inside the mound 17 has been linked with the tomb of a prominent figure. The item has been interpreted as a sign of definitive separation from the dead by the livings, who would have laid down the comb as the last item.⁷¹ In other contexts, however, their presence is very poor, if not almost absent, as in the case of Rome. Here, in about 500 urban burials, only two combs have been found.⁷² The combs are often found in rich cremation graves, sometimes burnt and buried with the remains of the bodies, but also in inhumation. In late Roman and early medieval cremations, these may have a ritual function, used to prepare the body of dead during the passage from life to death.⁷³ Sometimes miniature combs were made especially for inclusion in cremation.⁷⁴ In some cases, it has been speculated to have a liturgical more than functional value.⁷⁵

The major types of combs found in Classe and Ravenna are two side antler composite combs, which have a labour-intensive production method. The production method of composit-combs is explained in detail in other studies. Due to the properties of the antler, the method of production was very specific. In Ravenna the presence of combs associated with funerary rituals is attested especially between the 6th and 7th centuries. The combs are attested in the cemetery areas outside the walls of the city as well as in urban burials. A comb fragment of bone, dated between the 6th and the 7th, was found in a tomb in the north portico of the Basilica of Santa Croce. The graves, located in different areas of the church, are dated during the first half of the 6th century.⁷⁶ Wooden combs are reported in the sarcophagus found during excavation of the portico of Sant'Agata in Ravenna.⁷⁷ Some bone combs were found in a larger funerary area, composed of about 51 tombs inside the so-called domus of Via D'Azeglio and dated between the 6th and the 7th centuries. The cemetery area is set on part of the walls, and uses some elements as a burial chest, a prestigious urban residential *domus*.⁷⁸ Between the 6th and the 7th centuries, part of the *domus* are abandoned and partly transformed; to this phase belong burials. Among the few funerary objects, bone combs and brooches were found. A woman's

⁷⁰ De Marchi/Possenti 1998, 205.

⁷¹ Carver 2005.

⁷² Meneghini/Sant'Angeli Valenzani 2000, 109–115.

⁷³ Williams 2006.

⁷⁴ MacGregor 1985, 75; Rijkeliijkhuizen 2001, 201.

⁷⁵ MacGregor 1985, 77–82.

⁷⁶ Gelichi 1990.

⁷⁷ Gerola 1934.

⁷⁸ Montevicchi 2004.

grave had a comb made of bone behind her head, and her wrists had two bronze bracelets of the type “to end swollen”.⁷⁹

In the context of the port area of Classe, some burials have been identified which have combs like grave goods. The combs are inside the female and infant burials, typically behind the head of the dead, especially in relation to women's graves.⁸⁰ In one case, a comb was found on the left femur of the dead or to the left humerus, associated with the burial of a child. Among these seven combs inside the tombs only two are ornamented in the central rib; for others, without decoration, one can set a link by type ‘A’ also identified in Comacchio.⁸¹ The combs from Classe's burials 14, 24, and 9, however, do not have any decoration, but they have similar form and processing; they are all of the double row type of teeth, consisting of rectangular plates joined by means of two rods, having a semicircular section and fixed with iron rivets quadrangular section. One of the two rods is decorated with engravings on the board due to the cutting of the teeth; some are also visible traces possibly due to rounding and the appointment of the teeth, because it has horizontal tracks to the tip (Fig. 7). The comb of the grave 14 is a double row of teeth of different sizes and incomplete in some points (Fig. 8). The comb is made of five rectangular laminated plates, side by side and then adhered with four nails, square in section, set in the central rib. There are no decorations. This type of comb was found at the Villa Clelia (Imola), Luni, and Ibligo-Invillino.⁸² The comb from burial 24 (measures: 12,2 cm length; width 5.6 cm) is made with six lamellar elements; it presents two rows of different size teeth. The different parts are held together by two smooth central strips, semicircular in cross-section, in which we notice four through holes for the rivets. The handle shows along the edges of the notches due to the cutting of teeth (Fig. 9).⁸³ The comb from burial 9 (measures: 12,2 cm length; width 5,4 cm) has a double row of teeth of different sizes, with central ribs and iron rivets to hold together the lamellae of which it is composed; it has no decoration, visible traces of “*appuntamento*” are on the teeth.⁸⁴ The comb of the burial 25 is a multiple bilateral type but fragmented. It presents two teeth of different sizes, a central rib and at least four iron rivets. It is unclear as to how many blades it was composed.⁸⁵ The comb in grave 33 has a decoration in the central rib, made of oblique zig-zag and vertical lines (measures: 13,8 cm length; width 5.5cm).

⁷⁹ Negrelli 2004.

⁸⁰ Ferreri 2011.

⁸¹ Patitucci 1970, 92.

⁸² Melli 1984, 28; Bierbrauer 1973, 112.

⁸³ These combs have a comparison at Imola (Villa Clelia), Luni and Comacchio. See: Maioli 1994; Nastasi/Vay 1978, 88; Patitucci 1970, 92.

⁸⁴ Similar combs are amounted to Riva del Garda, Meizza, Romans d'Isonzo: Cavada 1992, 121; Torcellan 1986, 54; Riemer 2000, tav. 22.

⁸⁵ Riemer 2000, tav. 22; Nastasi/Vay 1978, 88; Murialdo 2001, 526–529.

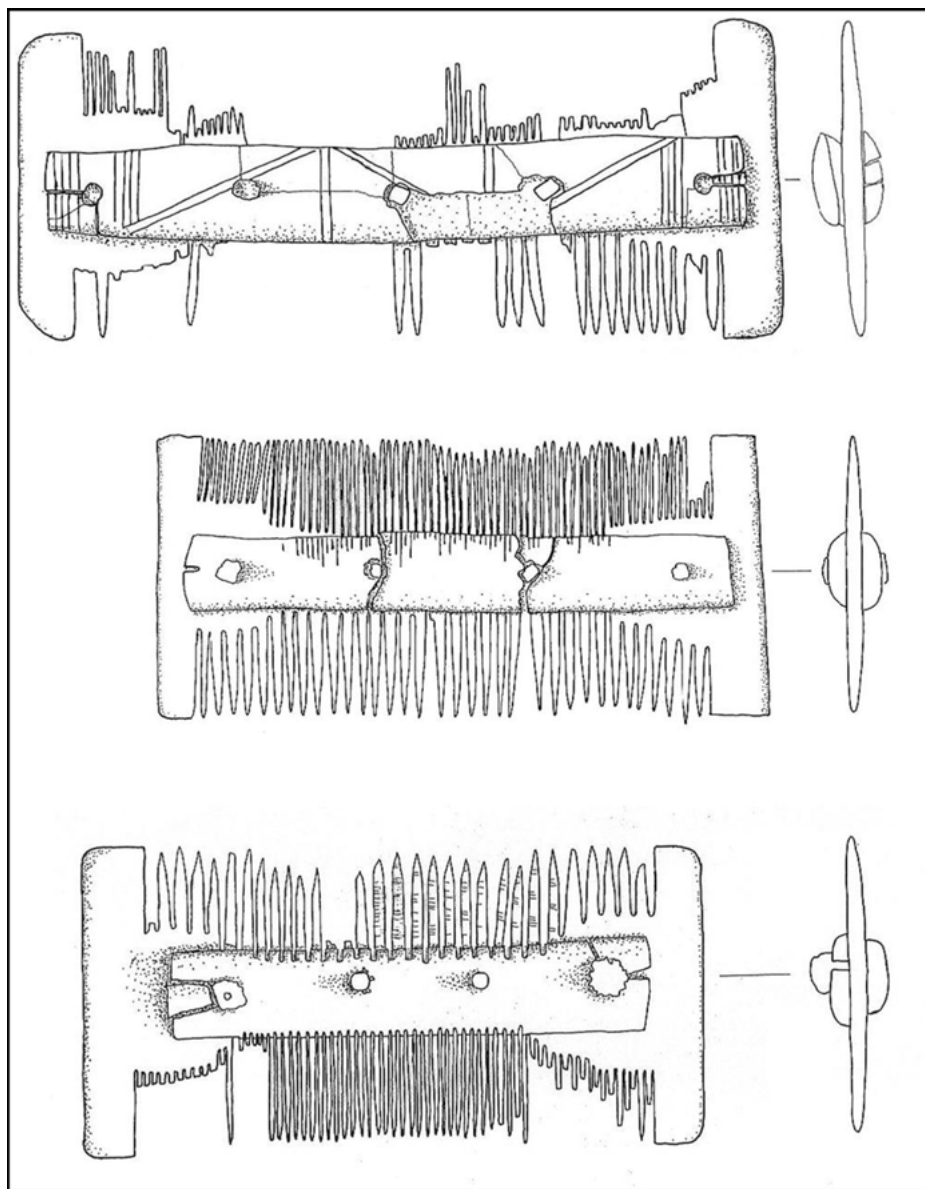


Fig. 7: Combs from burial (drawn by the author).



Fig. 8: Burial 14 with a comb near the head (Classe) (photo by the author).

This comb is made up of six rectangular strips held together by rivets fixed in the central rib. The holes for nails are five but only two nails remain (Fig. 10).⁸⁶ A pattern of parallel lines engraved along the edges of the central rib is seen on the comb of the grave 22. The combs found in the burials 22 and 32 are smaller than others. There are relevant elements in children's grave goods. This type of comb is widespread in

⁸⁶ Similar combs were found in Classe, Mezzocorona, and in Rome at the context of the Crypta Balbi. Guidoni 1983, 192–193; Bassi/Demetz/Endrizzi/Oberoslen1994, 145, 323; Ricci 2001, 405–406.



Fig. 9: Burial 24 with a comb and amethyst (Classe) (photo by the author).

many cemeteries, as an element in the deceased grave goods. It appears as early as the 4th century, but the peak of the spread was reached in the 6th to 7th century.⁸⁷ Working tracks and the cutting of the teeth are present in some combs, such as the one from grave 32. It is a multiple bilateral comb with a double row of teeth of

⁸⁷ Cunja 1996, 83–85. See also Curina 2010, 163–194, in particular about regional data: *ibid.*, 179–180.

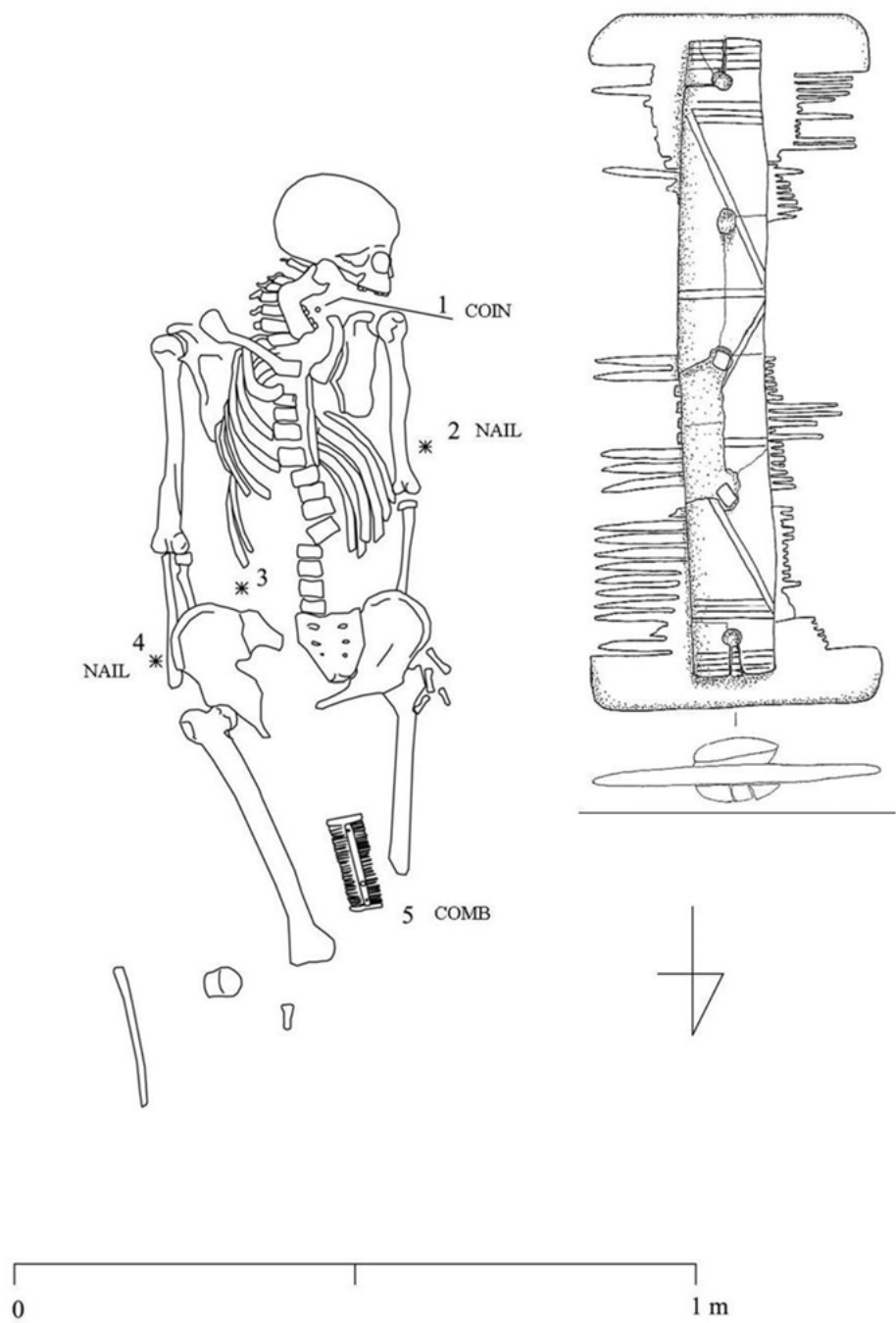


Fig. 10: Burial 33 with combs, nails and coin (Charon's Pence) (drawn by the author).

different sizes, and a central rib fragmented in multiple parts with five visible rivets. The rib shows traces due to cutting of the teeth. It is not known how many strips were used.⁸⁸

Other combs were found in the port area in the previous surveys, such as in building 1 and 2 and inside of some drainage structures, but it is unclear if they were in relation to burials.⁸⁹ Wooden combs have also been found in Classe and Ravenna. In the site of San Severo, a bone comb was found, but its context is questionable and is not clear if it belongs to a burial.⁹⁰ The position of the combs behind the head of the deceased is attested in other cemeteries, in both male and female, youth and adult graves. The placement of combs close to the head of the deceased is a widespread practice. It is present also in Rome, in the Vigna Barberini necropolis, where a comb was placed near the head of the deceased that had thicker teeth on one side,⁹¹ this use is also attested in some burial in Castel Trosino,⁹² in Verona inside a burial dated to the end of 6th century,⁹³ in a small cemetery at Acqui Terme, and in Nocera Umbra.⁹⁴

This type of comb has a big diffusion in Emilia Romagna. This practice is attested in the territory of Modigliana, in the ancient communication route of the Marzeno Valley, inside a cemetery dating to the 6th-7th century. The funerary area is a group of 23 graves of adults, children and infants. Five graves had a few burial objects such as bone combs, small ceramic jug, a bronze earring with vague glass paste, a small iron bangle, earrings bronze and an iron comb.⁹⁵ The position of the combs with respect to the body of the deceased was varied: on the pelvis, near the forearm, and on the chest. The combs belong to a single type with a double row of teeth, one was a large mesh and the other tight, welded at the center of two bars fixed by iron nails.⁹⁶ A particular decoration in the central element that also served as a handle are not present: in three cases the strips are not decorated while vertical incised bundles of three to four parallel lines are shown in only one comb. In this context, combs do not seem to have a relationship to gender and age of the buried; they are associated with burials of adults and infants. It was assumed that these

88 Similar combs were found at Monselice and Sant'Antonino Perti: Murialdo 2001, 526–529; De Marchi/Possenti 1998, 224, ill. VII.

89 Guidoni Guidi 1983, 192–195. About comb from Classe see also: Maioli 1994, 232–251, 249 ill. III-155.

90 Guidoni Guidi 1983, 193.

91 Rizzo, Villedieu, Vitale 1999, 369.

92 Mengarelli 1902, 283–290. See burial, 30, 33, 115, 119.

93 La Rocca 1989, 55.

94 Burial 22, 29, 30, 31, 34, 39, 66, 69, 100 in Pasqui, Paribeni 1919. About the comb's position see also Baldini Lippolis 1997, 146.

95 Montevocchi 2014, 33.

96 Guarnieri/Montevocchi, 2013, 46, ill.9.

objects were produced locally or imported from neighboring production areas.⁹⁷ Moreover, in Emilia Romagna territory, the presence of combs is also associated with other objects, such as ceramic materials, earrings or bracelets, especially in infant burials. In the upper valley of Bidente, in the territory around Forlì, only one comb was found placed inside a burial. It dated to the 6th century and came from the little town of Santa Sofia (Forlì), in Chiesa di Sopra. The comb came from a group of five burials, three in earth graves and two in a coffin. In addition to the comb inside the burial were two bronze earrings and in another tomb, dated to the 6th century, a silver earring.⁹⁸ In Emilia Romagna combs are attested also inside burials around Comacchio⁹⁹ and in the necropolis of Vogheza, in Ferrara's territory, dating between 6th-7th centuries.¹⁰⁰ In the necropolis of Santa Maria in Padovetere combs are present in 22 tombs, dating between the second half of the 5th and 7th centuries.¹⁰¹

As far as knives are concerned just as the combs, are one of the most common artifacts in tombs. In some funerary context, the knife and the comb are associated in the same graves.¹⁰² Usually the knife is deposited together with a belt to which it was hung, within pockets or leather or fabric bags.¹⁰³ In the harbor area of Classe, a handle knife made of bone was found in a burial. The handle has no holes and only a green hue due to contact with metal, perhaps of bronze. By analyzing the length, the handle may be missing a part that contained anchor blade nails (Fig. 11). Other handles were found in landfill layers and not inside coffin. On them are bronze rivets or in one case, iron. Likely removed for reuse, no trace of the blade was found. Microscopic investigations of the use-wear have shown that these instruments have been used in daily activities.

The presence of bone objects inside burials is also attested in the oldest tombs of Ravenna and Classe. These are mainly items related to the personal sphere, such as pins, needle ridges, mirror handles or boxes. An object made of ivory came from a burial in Podere Giorgioni.¹⁰⁴

⁹⁷ Montevicchi 2014, 39.

⁹⁸ Maioli 1994, 232–251, 249 III.37b.

⁹⁹ Patitucci Uggeri 1970, 92 ill. 19 tipo A.

¹⁰⁰ Berti 1992, 13–43; 41 ill. 7; Andreoli 2006, 309–320, 314 ill. 4.

¹⁰¹ Corti 2007, 531–552; 545, ill. 17.

¹⁰² This association of object is present in the necropolis of Romans d'Isonzo (Maselli Scotti 1989). Two combs with a knife was found inside burial 1 in Luni's theater (WardPerkins 1977, 664, tav. 331, 5–8).

¹⁰³ Bóna 1976.

¹⁰⁴ Burial 29 from Podere Giorgioni in Maioli 1990 b, 239 ill. 20/03.



Fig. 11: Knife from a burial (photo by the author).

A Bone *Atelier*

As we have seen combs from Classe and Ravenna show similarities in shape with other found in many cultures across Europe. This was a result of cultural influences, diffusion of knowledge but also the result of trading networks. As for the production bone objects, it can be traced to local production, most likely in the same port area of Classe where bone workshops were found. Although the workshop has not been found, it is possible according to material evidence and archaeological investigations that there was an *atelier* for bone in the port area.¹⁰⁵ Proof of this are the numerous semi-finished and waste products, mainly concentrated in the courtyard of one of the warehouses, specifically building 18 (Fig. 12). The carved or unfinished objects come mostly from trenches used as waste areas. In other cases, considerable objects were also identified as semi-finished and unfinished, as metatarsals, ribs probably used for plates, and a stage of sawn deer antlers. Indicators of handcrafted production activity are chopsticks found in the warehouse area, presenting the facets and the stem has a rectangular section, already cut in dimensions suitable for the machining of a needle or a pin (Fig. 13).¹⁰⁶ In addition to combs and knife handles, numerous objects made of bone come from the port buildings such as pins, game pieces, dice, but also plates and decorative elements for small containers. The forearm of a doll was also found in a pit, probably a disturbed burial. These objects were often placed inside tombs associated with young unmarried women (Fig. 14).¹⁰⁷

It is not easy recognised antler or bone craftsmen because antler workshop probably did not produce much waste, except for the burr, the tips of the tines and small chips of antler. The combmaker is usually presented with a number of options

¹⁰⁵ Augenti 2012.

¹⁰⁶ Béal 1983, 57–58, nn. 35–38.

¹⁰⁷ Martin-Kilcher 2000, 63–77.



Fig. 12: Building 18: bone object, waste productions and semifinished objects (map by the author).

regarding raw material. Combs may be fashioned from postcranial bone, typically bovid and equid ribs and metapodials. Other longbones may be used as well as horn and rarely ivory.¹⁰⁸ Material availability is important for the combmaker. Combs are usually made from pieces of antlers and often elaborately decorate. Methods of raw material pre-treatment may also have been diverse. It may have been considered important to work antler when fresh, or soaked when seasoned.¹⁰⁹ Decoration may take the form of incised lines or dot-and-circle motifs (Fig. 15). The variation of shape, style and size could relate to different uses, cultural influences,

¹⁰⁸ About combmaker and comb typologies see also MacGregor 2015.

¹⁰⁹ Ashby 2011, 199.



Fig. 13: Indicators of handcrafted production activity (photo by the author).

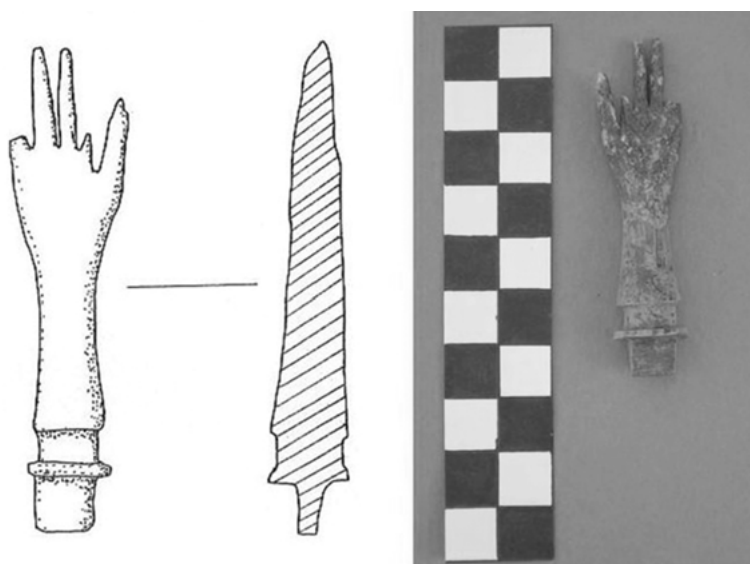


Fig. 14: The forearm of a doll from Classe (photo by the author).

changes in fashion or regional differences. In this period Ravenna and Classe's port area has still an important role for commercial routes in Mediterranean. From the eastern Mediterranean, the northern Africa and the Adriatic, came wine, oil, *garum*,

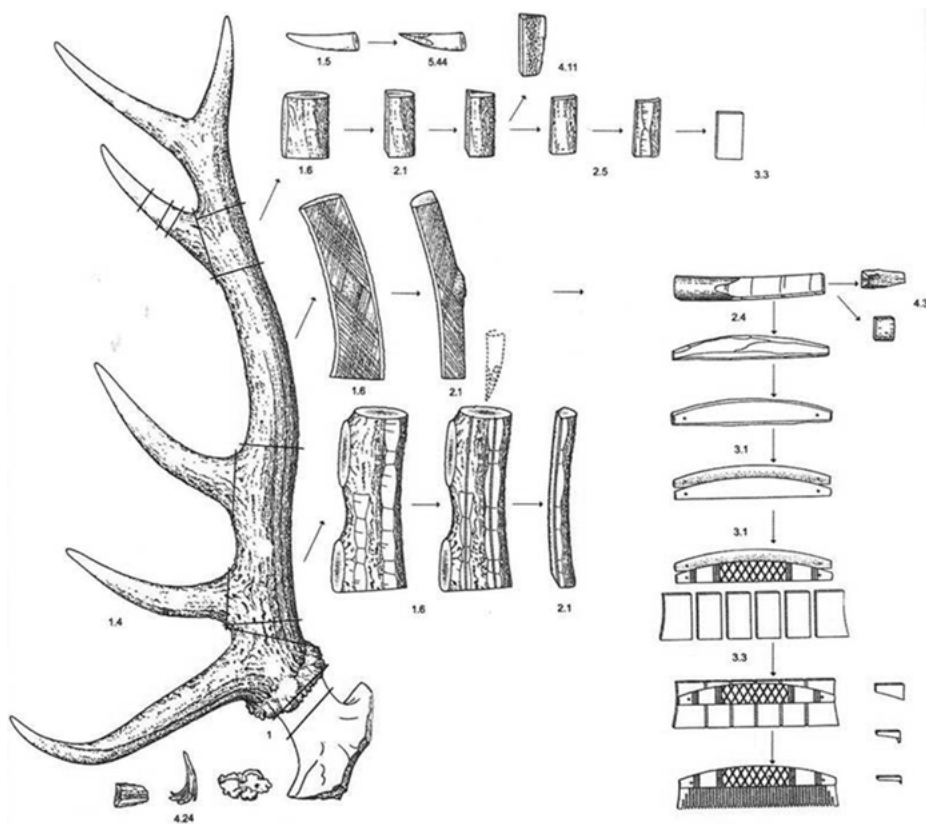


Fig. 15: The combmaker activities (after Larsen 2006).

cereals and others material, like amphora, lamps and cooking ware.¹¹⁰ This type of production activity is also part of different craft and production activities amounted in the port area. In the 7th century, indeed, some stores are partly transformed into their original use of collection and storage of goods. Evidence also suggests different production activities were installed such as glass processing, production of ceramics, mortar processing, and traces of obvious activities such as metal processing and probably woodworking.¹¹¹

Furthermore, it is assumed the presence of a laboratory to melt and work fibulae and similar objects.¹¹² In this landscape alternate craft activities, with houses, even those inside the warehouse, and little cemeteries. Archaeological evidence

¹¹⁰ Cirelli 2007; Cirelli 2014; Augenti/Cirelli 2010.

¹¹¹ Cirelli 2008, 138; Maioli 1991b, 223–247; Augenti 2012.

¹¹² Maioli 1991b, 247; Guidoni 1983, 180–191.

suggests an urban space organization where economic and productive activities are close to living space. In Ravenna there was a productive class and skilled workers, as mosaic artists, masons, painters, potters and glass makers, booksellers, silversmiths, blacksmiths.¹¹³ Material evidence from other urban contexts of the 7th century leads one to assume a presence of small-scale structures and shops located in urban areas and distributed in various centers of northern Italy.¹¹⁴ The evidence of production of these combs are also in workshops placed in urban contexts in the late 7th century. As in the case of the *ergasterion* of Crypta Balbi in Rome, there are scraps of ivory combs. Here two main groups of activities related to a rubbish dump in the 7th century have been identified, that of metals and ivory, bone and horn.¹¹⁵

In the area of Classe, a bone working area was found that is older than that of the port. It is also assumed that another one was in San Severo, where numerous scraps were unearthed.¹¹⁶ Probably the craft had a relation with the Roman villa, under the church of San Severo (Fig. 16). In Romagna other bone workshop were



Fig. 16: Bone's scraps from San Severo (after Maioli 1990).

¹¹³ Cosentino 2005, 430–432.

¹¹⁴ Ricci 1997, 265–267, ill. 11–12.

¹¹⁵ Ricci 2001a, 331; Giannichedda, Mannoni, Ricci 2001, 331–334.

¹¹⁶ Maioli 1990b, 452.

located inside the Rocca Malatestiana of Rimini.¹¹⁷ Outside of Emilia Romagna a bone workshop was identified in Milan in Piazza Erculea where excavations have found more than 200 objects made of bone. In this case, the workshop was active between the 1st and the 3rd century; in an area next to a residential sector there was one used for processing of materials.¹¹⁸ Other excavations, like Carthage between 1982–83, have brought to light many objects made of bone, thus identifying a machining workshop; it was thought that the material was scattered throughout the excavation but in particular two areas. Also in this case the scraps were found at the edge of living space. In 1990 in Rome, exploring a late Roman complex in the northeastern area of the Palatine,¹¹⁹ a large number of objects and their varieties have allowed for speculation on the technology and tools used by craftsmen. It was also possible to identify different types of materials made of bone and the great ability of works, documenting a specialized workshop. Similar very common combs have also been found in Rome, dated mostly between 6th and 7th centuries. These are formed by a rectangular plate reinforced by two curved section strips, set by five iron pins.¹²⁰ In addition, there are also scraps of ivory; evidence that even in Rome this extremely special and precious material was worked.¹²¹

Small Objects and Charms

Some objects inside the graves have a value of amulet. This value was based on the belief that some objects possessed virtues or produced a marvelous effect. Their special properties derived from the natural order and their power did not require the aid of spirits. The choice of objects and natural substances deposited in graves depended on the inherent properties of their materials: stones, plants and animal parts possessed occult materiality.¹²² Usually these types of objects express a desire on the part of the living to protect the dead in their passage to the underworld. Right now, in fact, the dead are exposed to evil spirits or demons.¹²³

It is necessary to be careful when determining the value of an object as a lucky charm and not risk interpreting objects of dubious function or difficult to interpret in this way, as has been done in the past. This is mainly to avoid the overly-widespread recognition of talismans.¹²⁴ In several cases, these antique items were placed within

¹¹⁷ Ortalli 1985, 354–355; Maioli 1980, 183.

¹¹⁸ Bianchi 1995, 100; Caporusso/Blockley 1992–93, 121–123.

¹¹⁹ Hostetter/Howe/Brandt/Clair 1991, 47–56.

¹²⁰ Ricci 2001.

¹²¹ Clair 1996, 368–374.

¹²² Gilchrist, 119–159.

¹²³ Hertz 1978.

¹²⁴ Effros 2003.

coffins and in direct contact with the body, arguing against an interpretation as residual items or accidental losses. It is important to identify the placement of these magical objects in relation to the corpse, whether in direct proximity to the body, inside the shroud or coffin, or in the grave fill. Many materials linked to magic that were placed in graves are organic, including substances such as parchment, hair, leather, beeswax, wood, and plant and animal parts.¹²⁵

In the conversion of Northern Europe to Christianity, the church tolerated and absorbed magical practices such as the use of healing charms, while the Christian cult of relics extolled the miraculous healing properties of the bones of saints or any substances that had come into contact with them. Some scholars argue that such practices were not merely 'pagan survivals', but vitally important elements that were deliberately absorbed into a new mix. This was not the simple fusion or syncretism of two sets of beliefs, but was instead a dynamic process that involved the sustained engagement of folk traditions and Christian practice with the Classical, Judaic and Islamic inheritance.¹²⁶

In Ravenna's cemeteries, the presence of animal bones placed next to the bodies of the dead refers to a classical tradition. This is attested in several contexts, but it is possible only in a few cases to assume a ritual value. In some burials along the ancient road *Romea Vecchia* animal knuckle bones and teeth are present.¹²⁷ In some burials of the port area, animal bones within the coffin fills were identified. In other cases, some teeth of animals were found placed on the chest of the deceased, as a kind of amulet.

The Nails

The presence of nails within the burials is not always traceable to the timber elements, coffins or wooden box. In the case of coffins, of which wooden track is no longer preserved, comes to help the taphonomic analysis of bone remains, which allows identification of the type of space in which the decomposition has occurred.¹²⁸ In these cases, also, often they find themselves nails placed on the corners of the earth graves, used to fix the walls; sometimes the nails were also used to secure the cover. The nails used for coffins were usually of iron, while those employed in the construction of furniture in iron or bronze. Often they have been found with the tip twisted or bent. In addition to a use of this type, namely the functional construction of the tomb, the nail also had a ritual use. They, in fact, could be deposited with the deceased in

¹²⁵ Gilchrist 2008, 124.

¹²⁶ Gilchrist 2008.

¹²⁷ Maioli 1986, 160.

¹²⁸ Duday 2006; Duday/Sellier 1990, 15–18.

superstitions or good luck. In this they are found on the individual's body, resting on the thorax, or within one small olla.¹²⁹ The apotropaic value of nails follows a Roman custom.¹³⁰ In some cases, however, in addition to an amount of luck, they have been interpreted as an attempt to "fix" the body of the deceased to the ground, preventing its return to the world of the living.¹³¹ The possibility that the dead could return to life in the form of *lemures*, or *larvae*, exerting a baleful influence on the living, was averted by the use of objects of magical power.¹³² In the Roman world, the nail was connected to *defixiones*, magical actions in which it is used the *defigere* verb, meaning to tie, nail, and force an individual to do or not do a certain action. The usual *defixiones* were inscriptions on papyrus or lead sheets, generally prepared against enemies.¹³³ The corpse, as an ancestor, was protected and honored, and had been seen as the protector of the family. At the same time, one had to monitor and defend himself from its possible negative actions. Some nails found inside both Roman and medieval tombs were interpreted as gestures of this function. A further use, difficult to associate with symbolic values, is one in which the nails are found directly in the body of the dead. They are impaled on the trunk, forearm, pelvis, and even in the head.¹³⁴ In Ravenna territory burials with nails fixed in the ribs of the dead were found,¹³⁵ while in another case in the right heel of the skeleton's foot.¹³⁶ Perforated and studded skulls, in addition to being seen as elements to not bring back the dead among the living, are also signs of medical activities, of penances imposed for murder or other executions.¹³⁷ In European folklore, driving a nail into the head of a corpse was a way to eliminate and not to return as a vampire or *revenant*.¹³⁸ Fear of polluted objects has its counterpart in the widespread fear of revenants and vampires dead returning from the grave. Such fear has often led to countermeasures to prevent their return, including the deposition of certain objects in the grave. Identifying such apotropaic grave goods may be difficult, but they may include incomplete or broken objects, or objects which look out of place in the context of a particular grave.¹³⁹

129 Ceci 2001, 87–97; Ceci 2005, 407–416.

130 Giuntella, 1990, 221; Giuntella 1992, 127–137 (in particular 132).

131 Ortalli 2010; Pellegrino 1999, 20–21; Ceci 2001, 89–90.

132 Perassi 1997.

133 Maioli 2010, 163–166.

134 Belcastro/Ortalli 2010.

135 Maioli 1994a, 108.

136 Burial 8 from necropolis of CMC at Classe: Maioli 2010, 165.

137 Belcastro/Ortalli 2010, 163–166.

138 The bibliography on this subject is vast, see: Gilchrist 2005; Gilchrist/Sloane 2005; Daniell 1998; Caciola 1996, 3–45.

139 Gilchrist 2008.

The Eggs

The egg is a symbol of rebirth, so closely linked to the ideology funeral. Symbolic references are prevalent. They can evoke, in fact, rituals related Orphism but also mythology. The eschatological and esoteric world is correlated with the achievement of “individual salvation”.¹⁴⁰ In the territory of Ravenna this ritual is attested in a single burial, found in the complex of San Severo. The burial (Number 157) is located in the outside area of the mausoleum, on the western slope.¹⁴¹ It is a burial in an amphora, destined for a newborn. The amphora was broken on the side of the neck, where it was placed a brick. Behind this brick and above the head of the small body, there were two eggs at the sides of the skull. In the tomb there were also small coins, unfortunately illegible (Fig. 17). In Roman graves, food offerings were particularly frequent but they are also known from early medieval graves. Usually these survive as animal bones, but other foodstuffs such as wild apples and a chicken egg have also been found in 6th-/7th century-graves.¹⁴² The presence of eggshell inside burials has no other attestations in the territory of Ravenna.

The presence of eggshells is attested in the necropolis of Nocera Umbra fairly frequently,¹⁴³ where thirty burials containing eggshells have been found. Some were found in a child's grave (burial 88), at the back of the small burial; others in the head area (Burials 140 and 54).¹⁴⁴ An infant burial containing a still-intact shell egg was also found in Puglia, in Rutigliano, in a cemetery context dating from the late 6th and 7th centuries.¹⁴⁵

Types and Rites

As for the types of burials attested to Ravenna and its territory there is a variety of situations. The identification of types of burials with chronological variants may be useful, especially for cemetery contexts with a long use, to analyze the transformations related to the funeral customs, identify regional identity, the differences between groups of individuals, social groups and *status*. The construction of chrono-typological sequences, however, can result in numerous methodological problems, especially if the research is based on partial studies with the aim of using this type of analysis to date individual graves or cemeteries contexts. In these cases, there is also

¹⁴⁰ Bottini 1992.

¹⁴¹ About the funerary organization in the complex of San Severo see: Ferreri 2011.

¹⁴² Pluskowski 2010.

¹⁴³ About the necropolis of Nocera Umbra: Pasqui/Paribeni 1918; Arena 1996, 11–21; Rupp 1996, 23–40; Rupp 1997, 167–183. For the analysis about gravegoods see Paroli/Ricci 2007.

¹⁴⁴ For the eggs in the burial of Nocera Umbra: Pasqui/Paribeni 1918.

¹⁴⁵ D'Angela/Volpe 1991, 785–826 and especially 817.



Fig. 17: Eggs and coins inside an infant burial (San Severo, Classe) (photo by the author).

the risk of creating an overly detailed typological division, which does not include the dynamics of the whole cemetery.

The context of San Severo in Classe has offered some interesting information thanks to the diachronic analysis of funerary practice in the complex. The church of San Severo, built above a Roman villa and a necropolis, near the mausoleum of a 4th century bishop of the city of Ravenna, was the last great act of monumental character constructed within the urban space in the period AD 570–582. Between the late 9th and 10th century a Benedictine monastery was built, entirely made of reused bricks recovered from the Roman villa beneath it.¹⁴⁶ The entire life of the site of San Severo is

¹⁴⁶ About recent excavation at San Severo see: Augenti/Begnozzi/Bondi/Cirelli/Ferreri/Malaguti/Scozzari 2012; Augenti/Cirelli 2016.

characterised by burials and this funerary practice changed and developed according to the life of the basilica and the monastery. Separate areas were reserved for different categories of people, according to the importance attributed to each sector of the cemetery, in relation with the church and the vicinity to the relics of the Saint, according space hierarchy within Christian cemeteries. These areas have been used for long periods, and they are characterized by different funerary practices and destinations.¹⁴⁷ The port area, on the other hand, offered a detailed look at historical period of the 7th and 8th centuries, and for burials related to living environments.

Different types of burials have been identified, based on construction characteristics and the materials employed. The overlap of graves and stratigraphic analysis of the deposit showed the coexistence of several funerary types, with some variations thereof, such as masonry boxes, primarily determined by the nature of the materials used in the construction of chests. In some funerary structures, in implementation of a box, and there are also some fragmentary inscriptions. This type of redeployment is present in many medieval sites, especially when the burial areas are set on settlements characterized by a long association. The types of burials are linked to funeral rites, cremation or burial. In some cemeteries of Ravenna used during the Roman period or since the 3rd and 4th centuries both rites are attested. In these cases the cremations were found inside of urns made of ceramic,¹⁴⁸ glass, stone, and also lead.¹⁴⁹

In the necropolis of podere Minghetti, which was in use from first century B. C. until 6th century A.D., a lot of *busta* have been found. Others are attested at the necropolis of Palazzette, beyond the basilica of Sant'Apollinare. This necropolis was used from the middle of the first century A.D. to at least the 4th and 5th centuries.¹⁵⁰

The types which have a long use are the crates within bricks as well as earth graves, which in some cases could differ in shape or depth. The bricks cases are distinguished by shape, type of coverage, the floor type and sizes. The structures are made of reused bricks and roofing tiles, bonded with simple earth and in some rare cases with mortar. The bottom of the case may be ground or by intact or fragmented bricks placed horizontally. In some cases, the form can be anthropomorphic. In the complex of San Severo this type is used between 6th and 7th centuries, in the funerary areas connected with the basilica. The large brick cases are often used to accommodate more than one individual, often associated with people linked to the same family. At San Severo the anthropological studies have shown some possible familiarity between some individuals inside the same graves. Here, in the mausoleum area – the more significant and symbolic space of the ecclesiastic complex – the large bricks cases were open to put a new body inside, then closed

¹⁴⁷ Ferreri 2011.

¹⁴⁸ Maioli 1990a, 393.

¹⁴⁹ Podere Giorgioni. See: Maioli 1990a, 392.

¹⁵⁰ Maioli 1990a, 406.

with tiles and mortar. In some cases, they moved the last body inside to make room for the new depositions. The practice of removing the human remains was careful: the skulls on one side, legs and arms on the other side.¹⁵¹

The arrangement of the bricks could be different, placed horizontally or usually cut into *quinsquipedali*. In some cases they were found tipping brick tombs, which contained burial in wooden coffin, as the CMC necropolis on the Via Romea Vecchia¹⁵² and in the necropolis in via dei Poggi.¹⁵³

The coffin covers are made with different materials such as bricks, horizontal tiles, blocks of limestone or red Verona marble. In some contexts, the presence of wooden roofing is also hypothesized, preserved only in part because of problems related to the preservation of wood in places like the port warehouses in Classe. In some particularly damp contexts, wood is perfectly preserved. It was also possible to find the wooden coffins used for activities related to transporting the dead in the cemetery.¹⁵⁴ The traces of wooden fences are also present in the negative, like hole, with removed poles sometimes found still *in situ*.¹⁵⁵ The wooden coffin could be made without nails.

In the context of San Severo the covers of brick coffin showed signs of intensive use of the same box to lay dead in different time. In other cases, instead, the covers were closed and sealed with mortar.

A type attested in Ravenna, especially in Classe, is the use of amphorae like coffin (*enchytrismos*). These are mainly of African or Gaza amphora type used as a whole, especially for infant burials, that usually were close to houses.¹⁵⁶ The amphora can also be cut down the sides or vertically, as a sort of burial bed on which lay the dead. In the necropolis of Vasche dello Zuccherificio, instead, amphorae have been used for adult's burials. These types are mainly used from the 3rd century onwards, like those of Podere Minghetti, and reached a maximum spread during the 5th and 6th centuries.¹⁵⁷ Also the sarcophagi were used for adults and children. This type was more than a simple place to entomb the dead. These tombs, indeed, were visible to all who entered the church and their inscriptions available as guides for commemoration.¹⁵⁸ The sarcophagi were the perfect tools for commemoration and markers of the social roles of the persons who were entombed, so

¹⁵¹ Ferreri 2011.

¹⁵² Maioli 1990a, 399.

¹⁵³ Leoni, Maioli, Montevocchi 2008.

¹⁵⁴ Leoni, Maioli, Montevocchi 2008, 92.

¹⁵⁵ Leoni, Maioli, Montevocchi 2008, 93.

¹⁵⁶ Ferreri 2014.

¹⁵⁷ Stoppioni 1983, 130–131, 133.

¹⁵⁸ Valenti Zucchini/Bucci 1968.

they were used for bishops and members of the local elites. In Ravenna an active and regular use of sarcophagi continued into the early 9th century.¹⁵⁹

The use of cappuccina type continued until the 6th-7th century. They are present in suburban contexts within the city of Ravenna. Furthermore, their presence is attested at church buildings, like in San Severo, but also in other contexts such as the *domus* of via d'Azeglio, the *domus* of via Pier Traversari or near the necropolis of Cà Lunga, where burials, especially of *enchytrismos* and *alla cappuccina* type, have been found.¹⁶⁰ One cappuccina was found in Santa Giustina in Capite Porticis and in the cemetery area of Porta Caesarea (Fig. 18).¹⁶¹

In some funerary structures, there are also some fragments of *spolia*. This practice is present in many medieval sites, especially when the burial areas are placed on settlements characterized by a long habitation. In some cases, the setting of cemetery areas on disused buildings, such as *domus* or public buildings, promotes the use of some walls as funerary containers. Similar cases are present in the port area where a burial uses a masonry water runoff channel as a burial chest (Fig. 19).¹⁶² The use of brick or stone material from more ancient buildings is already attested between the 1st and 3rd century, like in the necropolis of via dei Poggi.¹⁶³ In the site of via D'Azeglio a burial uses the mosaics floor of the *domus* like deposition.¹⁶⁴ Another burial reused a *cocciopesto* tank like coffin.¹⁶⁵ In the narthex of San Severo, structures of the *thermae* of the Roman villa below the basilica are used as part of funerary coffers. Sometimes a brick or a *tegula* is used like a funerary cushion below the head of the deceased. This practice is attested in the Podere Minghetti¹⁶⁶ and in the complex of San Severo, where funerary cushion was used for adult and infant burials.

From 7th century, the practice of laying of small personal goods inside the grave is abandoned and some types are no longer used. The cemetery organization, however, became more complex and articulated: the funerary areas are often distinct, not only by gender and age, but also by parental or social groups.¹⁶⁷ Different languages are used to express identity and memory and the funerary sphere is a key of social, religious and politica context. The funeral and the treatment of the corpse played an important role in transformation of mortuary and commemorative ritual. Church's

¹⁵⁹ The sarcophagi of Ravenna have frequently been the object of studies and research, for the social and political significance and interpretation see Schoolman 2013 and its bibliography.

¹⁶⁰ Maioli 1987, 61.

¹⁶¹ Cirelli 2008.

¹⁶² Ferreri 2011.

¹⁶³ Leoni/Maioli/Montevecchi 2008, 94.

¹⁶⁴ Negrelli 2004, 124 ill. 181.

¹⁶⁵ Cirelli 2008, 120.

¹⁶⁶ Leoni/Maioli/Montevecchi 2008.

¹⁶⁷ Ferreri 2011.



Fig. 18: *Cappuccina* from the basilica of San Severo (photo by the author).

interest for liturgy increased and funeral rites became more controlled by ordained members of the clergy. The location and the quality of the burials in the cemetery, especially in reference to sacred buildings, became relevant especially for social status and identity of the individual within the community.¹⁶⁸

¹⁶⁸ Effros 1997.



Fig. 19: Burial uses a masonry water runoff channel as a burial chest (Classe) (photo by the author).

Bibliography

Andreoli, Alberto. 2007. "Cenni sul Delta tardo antico e cristiano." In *Genti nel Delta da Spina a Comacchio. Uomini, territorio e culto dall'antichità all'alto Medioevo. Catalogo della Mostra (Comacchio, 2006–2007)*, edited by Fede Berti, Maria Bollini, Sauro Gelichi and Jacopo Ortalli, 309–320. Ferrara.

- Ahumada Silva, Isabel. 1990. "Le tombe e i corredi." In *La necropoli di S. Stefano in pertica. Campagne di scavo 1987–1988*, edited by Isabel Ahumada Silva, Paola Lopreato and Amelio Tagliaferro, 21–98. Udine.
- Arena Maria. S. 1996. "La necropoli longobarda di Nocera Umbra: cento anni di scoperte." In *Umbria longobarda. La necropoli di Nocera Umbra nel centenario della scoperta*, edited by Lidia Paroli, 11–21. Firenze.
- Arslan, Ermanno A. 2010. "I documenti monetari e paramonetari." In *La collina di San Mauro a Cividale del Friuli. Dalla necropoli longobarda alla chiesetta basso medievale*, edited by Isabel Ahumada Silva, 175–201. Firenze.
- Ashby, Stephen P. 2011a. "An atlas of medieval combs from northern Europe." *Internet Archaeology* 30: 3.
- Ashby, Stephen P. 2011b. "The language of the combmaker. A study of craft and technology in early medieval England." In *Written in Bones. Studies on technological and social contexts of past faunal skeletal remains*, edited by Justyna Baron and Bernadeta Kufel-Diakowska, 9–24. Worclaw.
- Augenti, Andrea. 2005. "Ravenna e Classe: archeologia di due città tra la tarda Antichità e l'alto Medioevo." In *Le città italiane tra tarda Antichità e l'alto Medioevo*, edited by Andrea Augenti, 185–217. Firenze.
- Augenti, Andrea. 2006. *La basilica e il monastero di San Severo. La storia, gli scavi*. Ravenna.
- Augenti, Andrea. 2010. "Nascita e sviluppo di una capitale: Ravenna nel V secolo." In *Le trasformazioni del V secolo. L'Italia, i barbari e l'Occidente romano*, edited by Paolo Delogu and Stefano Gasparri, 343–369. Turnhout.
- Augenti, Andrea. 2012. "Classe: archaeologies of a lost city." in *Urbs extinctae. Archaeologies of abandoned classical towns*, edited by Andrea Augenti and Neil Christie, 47–76. Ashgate.
- Augenti, Andrea and Bertelli, Carlo, eds. 2006. *Santi Banchieri Re. Ravenna e Classe nel VI secolo. San Severo il tempio ritrovato*. Milano.
- Augenti, Andrea, Begnozzi, Ilaria, Bondi, Mila, Cirelli, Enrico, Ferreri Debora, Malaguti, Cecilia and Scozzari, Paolo. 2012. "Il monastero di San Severo a Classe: i risultati delle campagne di scavo 2006–2011." *Atti del VI Convegno SAMI (L'Aquila, 2012)*, edited by Fabio Redi and Alfonso Forgione, 238–245. Firenze.
- Augenti, Andrea and Cirelli, Enrico. 2010. "Classe: un osservatorio privilegiato per il commercio della Tarda Antichità", in *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in Mediterranean*, edited by Simonetta Menchelli, Sara Santoro, Marinalle Pasquinucci and Gabriella Guiducci, 605–615. Oxford.
- Augenti, Andrea and Cirelli, Enrico. 2012. "From suburb to port: the rise (and fall) of Classe as a centre of trade and redistribution." In *Rome, Portus and the Mediterranean*, edited by Simon Keay, 205–221. Rome.
- Augenti, Andrea and Cirelli, Enrico. 2016. "San Severo and religious life in Ravenna during the ninth and tenth centuries." In *Ravenna: its role in earlier medieval change and exchange*, edited by Judith Herin and Jinty Nelson, 297–321. London.
- Baldi, Elena. 2015. *The coin evidence as a source for history of Classe (Ravenna), Excavations of the Harbor area (2001–2005) and the Basilica of San Severo (2006–2010)*. Oxford.
- Baldini Lippolis, Isabella. 1997. "Tombe di età longobarda a S. Polo d'Enza (RE), loc. Pontenovo." *Archeologia dell'Emilia-Romagna* 1/1: 142–152.
- Baldini Lippolis, Isabella. 2004. "Sepolture privilegiate nell'Apostoleion di Ravenna." *Felix Ravenna* 153: 15–82.
- Baldini Lippolis, Isabella. 2007. "Abbigliamento e simboli di rango." In *Felix Ravenna: La croce, la spada, a vela: l'Alto Adriatico fra V e VI secolo*, edited by Andrea Augenti and Carlo Bertelli, 134–147. Milano.

- Barbiera, Irene. 2005. *Changing Lands in Changing Memories. Migration and Identity during the Lombard Invasion*. Firenze.
- Baron, Justyna and Kufel-Diakowska, Bernadeta, eds. 2011. *Written in Bones. Studies on technological and social contexts of past faunal skeletal remains*. Wrocław.
- Bassi Cristina, Demetz Stefan, Endrizzi, Lorenza and Oberoslen, Roberta. 1994. "Manufatti in metallo, pasta vitrea, osso e corno." In *Archeologia a Mezzocorona di Bolzano. Documenti per la storia del popolamento rustico di età romana nell'area atesina*, edited by Enrico Cavada, 127–147. Trento.
- Bavant, Bernard. 1990. "Les petits objects." In *Caričin Grad*, II, edited by Bernard Bavant, Vladimir Kondic and J.-M. Spieser, 191–257. Belgrado/Roma.
- Béal, Jean-Claude. 1983. *Catalogue des objets de tabletterie du Musée de la Civilisation gallo-romaine de Lyon*. Lyon.
- Belcastro, Maria Giovanna and Ortalli, Jacopo. 2010. *Sepulture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia Romagna*. Firenze.
- Bermond Montanari, Giovanna. 1968. *La chiesa di S. Severo nel territorio di Classe. Risultati dei recenti scavi*. Bologna.
- Bermond Montanari, Giovanna. 1975. "La topografia della città di Ravenna e del suo territorio attraverso le testimonianze archeologiche." *Felix Raveana* 109–110: 59–77.
- Berti, Fede. 1992. "La necropoli altomedievale di Voghenza. Relazione dello scavo e analisi dei contesti." In *Voghenza. Una necropoli di età romana nel territorio ferrarese*, 13–43. Ferrara.
- Berti, Fede, Bollini, Maria, Gelichi, Sauro and Ortalli, Jacopo. *Genti nel Delta da Spina a Comacchio. Uomini, territorio e culto dall'antichità all'alto Medioevo. Catalogo della Mostra (Comacchio, 2006–2007)*. Ferrara.
- Berti, Fede and Ortalli, Jacopo. 2000. "Le aree funerarie: aspetti archeologici e culturali: topografia e monumenti delle necropoli." In *Aemilia. La cultura romana in Emilia Romagna dal III secolo a.C. all'età costantiniana*, Catalogo della mostra (Bologna 2000), edited by Mirella Marini Calvani, 205–213. Venezia.
- Bianchi, Chiara. 1995. *Spilloni in osso di età romana: problematiche generali e rinvenimenti in Lombardia*. Milano.
- Bierbrauer, Volker. 1973. "Gli scavi a Ibligo-Invillino, Friuli campagne degli anni 1972–1973 sul colle Zucca." *Aquileia Nostra*: 94–102.
- Bierbrauer, Volker. 1987. *Invillino-Ibligo in Friaul, I. Die römische Siedlung und das Spätantik-frühmittelalterische Kastum*. München.
- Bierbrauer, Volker. 1994. "Archeologia degli Ostrogoti in Italia." *I Goti*, 170–223. Milano.
- Bóna, István. 1976. *À l'aube du Moyen Âge. Gépides et Lombards dans le bassin des Carpates*. Budapest.
- Bottini, Angelo. 1992. *Archeologia della salvezza. L'escatologia greca nelle testimonianze archeologiche*. Milano.
- Brogiolo, Gian Pietro and Cantino Wataghin, Gisella, eds. 1998. *Sepulture tra IV e VIII secolo, Atti del VII Seminario sul Tardo Antico e l'Alto Medioevo in Italia centro settentrionale (Gardone Riviera, 24–26 ottobre 1996)*. Mantova.
- Caciola, Nancy. 1996. "Wraiths, revenants and ritual in medieval culture." *Past and Present* 15: 3–45.
- Cantino Wataghin, Gisella. 1999. "The ideology of urban burials." In *The Idea and Ideal of the Town between Late Antiquity and the Early Middle Ages (The transformation of the Roman World, 4)*, edited by Gian Pietro Brogiolo and Bryan Ward-Perkins, 147–180. Leiden/Boston/Köln.
- Cantino Wataghin, Gisella and Lambert, Chiara. 1998. "Sepulture e città. L'Italia settentrionale tra IV e VIII secolo." In *Sepulture tra IV e VIII secolo, Atti del VII Seminario sul Tardo Antico e l'Alto*

- Medioevo in Italia centro settentrionale (Gardone Riviera, 24–26 ottobre 1996)*, edited by Gian Pietro Brogiolo and Gisella Cantino Wataghin, 89–114. Mantova.
- Caporusso, Donatella and Blockley, Paul. 1992–1993. “Milano piazza Erculea scavo pluristratificato.” *Notiziario della Soprintendenza archeologica della Lombardia*: 121–123.
- Carver, Martin. 2005. *Sutton Hoo: a seventh-century princely burial ground and its context*. London.
- Castagna, Daniela and Tirelli, Margherita. 1995. “Evidenze archeologiche di Oderzo tardoantica ed altomedievale: i risultati preliminari di recenti indagini.” In *Città, castelli e campagne nei territori di frontiera, secoli VI–VII*, edited by Gian Pietro Brogiolo, 121–134. Mantova.
- Cavada, Enrico. 1992. “Elementi romani e germani nel territorio alpino tra Adige e Sarca: aspetti e continuità dell’insediamento” In *Il territorio tra tardoantico e altomedioevo. Metodi di indagine e risultati*, edited by Gian Pietro Brogiolo and Lanfredo Castelletti, 99–130. Firenze.
- Ceci, Francesca. 2001. “L’interpretazione di monete e chiodi in contesti funerari: esempi del suburbio romano.” In *Culto dei morti e costumi funerari romani*, edited by Michael Heinzelmann, Jacopo Ortalli, Peter Fasold and Marion Witteyer, 87–97. Wiesbaden.
- Ceci, Francesca. 2005. “La deposizione della moneta nella tomba: continuità di un rito tra paganesimo e cristianesimo.” *Histria Antiqua* 13: 407–416.
- Christie, Neil. 2008. *From Constantine to Charlemagne: an archaeology of Italy, AD 300–800*. Ashgate.
- Christie, Neil and Gibson, Sheila. 1988. “The city wall of Ravenna.” *Papers of the British School at Roma* 56: 156–197.
- Cirelli, Enrico. 2006. “La ceramica, i commerci, la vita quotidiana.” In *Santi, banchieri, re. Ravenna e Classe nel VI secolo. San Severo il tempio ritrovato*, edited by Andrea Augenti and Carlo Bertelli, 35–36. Milano.
- Cirelli, Enrico. 2007. “Ravenna e il commercio nell’adriatico in età tardoantica.” In *Felix Ravenna: La croce, la spada, a vela: l’Alto Adriatico fra V e VI secolo*, edited by Andrea Augenti and Carlo Bertelli, 45–50. Milano.
- Cirelli, Enrico. 2008. *Ravenna: archeologia di una città*. Firenze.
- Cirelli, Enrico. 2010. “Typology and diffusion of Amphorae in Ravenna and Classe between the 5th and the 8th centuries AD.” In *LRCW 4 Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and archaeometry. The Mediterranean: a market without frontiers*, edited by Natalia Poulou-Papadimitriou, Eleni Nodarou and Vassilis Kilikoglou, 541–552. Oxford.
- Cirelli, Enrico. 2013. “La topografia della “Gaita di S. Maria Maggiore” dall’antichità al Medioevo.” In *La basilica di Santa Croce. Nuovi contributi per Ravenna Tardoantica*, edited by Max David, 67–92. Ravenna.
- St Clair, Archer. 1996. “Evidence for late antique bone and ivory carving on the northeast slope of the Palatine: the Palatine east excavation.” *Dumbarton Oaks Papers*: 368–374.
- Corti, Carla. 2007. “Santa Maria in Padovetere.” In *Genti nel Delta da Spina a Comacchio. Uomini, territorio e culto dall’antichità all’alto Medioevo. Catalogo della Mostra (Comacchio, 2006–2007)*, edited by Fede Berti, Maria Bollini, Sauro Geliche and Jacopo Ortalli, 531–552. Ferrara.
- Cosentino, Salvatore. 2005. “L’approvvigionamento annonario di Ravenna dal V all’VIII secolo: l’organizzazione e i riflessi socio-economici”, in: *Ravenna: Da capitale imperiale a capitale esarcale*, vol. 1, 405–434. Spoleto.
- Cunja, Radovan. 1996. “Reperti in osso e corno.” In *Capodistria tardoromana e altomedievale. Lo scavo archeologico nell’ex orto dei Cappuccini negli anni 1986–87 alla luce dei reperti dal V al IX sec. d.C.*, edited by Radovan Cunja, 83–90. Capodistria.
- Curina, Renata. 2010. “Corredi della necropoli tardo antica di Casteldebole (Bologna). In *Oreficeria in Emilia Romagna. Archeologia e storia tra età romana e medioevo*, edited by Anna L. Morelli and Isabella Baldini Lippolis, 163–194. Bologna.

- D'Angela, Cosimo. 1995. "Contesti tombali tardo antichi e altomedievali." *La parola del Passato. Rivista di studi classici* 50/1: 319–326.
- D'Angela, Cosimo and Volpe, Giuliano. 1991. "Insediamenti e cimiteri rurali tra tardoantico e alto medioevo nella Puglia centro-settentrionale: alcuni esempi." *Mélanges de l'École Française de Roma. Moyen Âge* 103/2: 785–826.
- Daniell, Christopher. 1998. *Death and burial in medieval England: 1066–1550*. London/New York.
- De Marchi, Marina. 1991. "Reperti metallici e miscellanea." In *Archeologia a Monte Barro I. Il grande edificio e le torri*, edited by Gian Pietro Brogiolo and Lanfredo Castelletti, 105–135. Lecco.
- De Marchi, Marina. 1999. "Reperti metallici e miscellanea." In *S. Giulia di Brescia, gli scavi dal 1980 al 1992. Reperti preromani, romani e altomedievali*, edited by Gian Pietro Brogiolo, 315–331. Firenze.
- De Marchi, Marina. 2001. "Manufatti in metallo, osso, pietre preziose." In *Archeologia a Monte Barro II. Gli scavi 1990–97 e le ricerche al S. Martino di Lecco*, edited by Gian Pietro Brogiolo and Lanfredo Castelletti, 173–185. Como.
- De Marchi, Marina and Possenti, Elisa. 1998. "Rocca di Monselice (PD). Le sepolture Longobarde." In *Sepolture tra IV e VIII secolo*. Atti del VII Seminario internazionale sul tardoantico e l'altomedioevo in Italia centro-settentrionale, edited by Gian Pietro Brogiolo and Gisella Cantino Wataghin, 197–228. Mantova.
- De Rubeis, Flavia. 2007. "Rappresentatività sociale delle epigrafi tra IV e X secolo." In *Archeologia e società tra Tardo Antico e Alto Medioevo*, Atti del XII Seminario sul Tardo Antico e l'Alto Medioevo, edited by Gian Pietro Brogiolo and Alexandra Chavarria, 387–400. Mantova.
- Dierkens, Alain and Périn, Patrick. 1997. "Death and burial in Gaul and Germania, 4th–8th century." In *The Transformation of the Roman World, AD 400–900*, edited by Leslie Webster and Michelle Brown. London.
- Duday, Henry. 2006. *Lezioni di archeotantologia: archeologia funeraria e antropologia di campo*. Roma.
- Duday, Henry and Sellier, Pascal. 1990. "L'archéologie des gestes funéraires et la taphonomie." *Les Nouvelles de l'Archéologie* 40: 15–18.
- Effros, Bonny. 1997. "Beyond Cemetery Walls: Early Medieval Funerary Topography and Christian Salvation." *Early Medieval Europe* 6: 1–23.
- Effros, Bonny. 2002. *Caring for body & soul. Burial and the afterlife in the Merovingian World*. Pennsylvania.
- Effros, Bonny. 2003. *Merovingian mortuary archaeology and the making of the Early Middle Ages*. Berkeley.
- Ferreri, Debora. 2009. "Sepolture e riti funerari a Classe: una lunga prospettiva diacronica." In *V Congresso Nazionale di Archeologia Medievale*, edited by Giuliano Volpe and Pasquale Favia, 459–464. Firenze.
- Ferreri, Debora. 2011. "Spazi cimiteriali, pratiche funerarie e identità nella città di Classe." *Archeologia Medievale* XXXVIII: 59–74.
- Ferreri, Debora. 2014. "La città dei vivi e la città dei morti. La ridefinizione degli spazi urbani e le pratiche funerarie a Ravenna e nel territorio circostante tra la Tarda Antichità e l'Alto Medioevo." *Hortus Artium Medievalium* 20: 112–123.
- Février, Paul. 1987. "La mort chrétienne". In *Segni e riti nella Chiesa altomedievale occidentale*, Atti della XXXIII Settimana di studio del Centro italiano di studi sull'alto Medioevo, 881–942. Spoleto.
- Foreman, Martin. 2016. "Anglo-Saxon combs from Castledyke and Flixborough." In *Le témoignage de la culture matérielle: mélanges offerts au Professeur Vera Evison. The evidence of material*

- culture: *Studies in honour of Professor Vera Evison*, edited by Ian Riddler, Jean Soulat and Lynne Keys, 231–244. Autun.
- Gastaldo, Guido. 1998. "I corredi funerari nelle tombe "tardo romane" in Italia settentrionale." In *Sepulture tra IV e VIII secolo*, Atti del VII Seminario sul Tardo Antico e l'Alto Medioevo in Italia centro settentrionale, edited by Gian Pietro Brogiolo and Gisella Cantino Wataghin, 15–58. Mantova.
- Geake, Helen. 1992. "Burial practice in seventh- and eighth-century England." In *The Age of Sutton Hoo*, edited by Martin Carver, 83–94. Woodbridge.
- Geake, Helen. 1997. *The Use of Grave-goods in Conversion-period England c. 600–850*. Oxford.
- Gelichi, Sauro. 2005. "Le mura di Ravenna", in: *Ravenna da capitale imperiale a capitale esarcale*, Atti del XVII Congresso internazionale di studi sull'alto Medioevo, 821–840. Spoleto.
- Gelichi, Sauro. 1990. "Le tombe 231 e 274." In *Contesti tardo-antichi e altomedievali dal sito di Villa Clelia (Imola, Bologna)*, edited by Renata Curina, Patrizia Farello, Sauro Gelichi, Paola Novara and Maria Luisa Stoppioni = *Archeologia Mediavale* XVII: 134–142, 121–234.
- Gerola, Giuseppe. 1934. "Il quadriportico di S. Agata." *Felix Ravenna* XLIII: 85–123
- Giannichedda, Enrico, Mannoni, Tiziano and Ricci, Marco. 2001. "Ricerche sui cicli produttivi nell'atelier della Crypta Balbi." In *Roma. Dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Saguì, and Laura Vendittelli, 331–335. Milano.
- Gilchrist, Roberta. 2005. "Requiem for a lost age." *British Archaeology* 84: 28–33.
- Gilchrist, Roberta. 2008. "Magic for the dead? The archeology of magic in later medieval burials", *Medieval Archaeology* 52: 119–159.
- Gilchrist, Roberta and Sloane, Barney. 2005. *Requiem: the Medieval monastery in Britain*, London.
- Gimbutas, Marja. 1971. *The Slavs. Ancient Peoples and place*. London.
- Giostra, Caterina. 2012. "Analisi dei corredi e delle offerte." In *Archeologia Medievale a Trezzo sull'Adda. Il sepolcreto longobardo e l'oratorio di San Martino le chiese di Santo Stefano e San Michele in Sallianese*, edited by Silvia Lusuardi Siena and Caterina Giostra, 218–288. Milano.
- Giuntella, Anna Maria. 1990. "Sepoltura e rito: consuetudine e innovazione". In *Le sepolture in Sardegna dal IV al VII*. Atti del IV convegno di Archeologia trado romana e medievale, 215–229. Oristano.
- Giuntella, Anna Maria. 1992. "L'uso degli spazi: sepolture e riti funerari", *La "Civitas Christiana". Urbanistica delle città italiane fra tarda antichità e altomedioevo. Aspetti di archeologia urbana*, 127–137. Torino.
- Giuntella, Anna Maria. 1998. "Note su alcuni aspetti della ritualità funeraria nell'altomedioevo. Consuetudini e innovazioni." In *Sepulture tra IV e VIII secolo*, Atti del VII Seminario sul Tardo Antico e l'Alto Medioevo in Italia centro settentrionale, edited by Gian Pietro Brogiolo and Gisella Cabtino Wataghin, 61–75. Mantova.
- Guarnieri, Chiara and Montevicchi, Giovanna. 2014. "Recenti rinvenimenti archeologici nel territorio di Modigliana." *Studi Romagnoli* LXIV: 26–50.
- Guidoni Guidi, Giuliana. 1983. "Oggetti in metallo." In *Ravenna e il porto di Classe*, edited by Giovanna Bermond Montanari, 180–191. Imola.
- Halsall, Guy. 1995a. *Early Medieval Cemeteries. An Introduction to Burial Archaeology in the post-Roman West*. Glasgow.
- Halsall, Guy 1995b. *Settlement and Social Organization. The Merovingian Region of Metz*. Cambridge/New York.
- Halsall, Guy. 2010. *Cemeteries and Society in Merovingian Gaul. Selected Studies*, in History and Archaeology, 1992–2009. Leiden/Boston.

- Härke, Heinrich. 2001. "Cemeteries as Places of Power." In *Topographies of Power in the Early Middle Ages*, edited by Frans Theuws, Carine Van Rhijn and Mayke De Jong, 9–30. Leiden/Boston/Köln.
- Hesberg, Henner von. 1998. "Beigaben in Gräbern Roms" In *Bestattungssitte und kulturelle Identität: Grabanlagen und Grabbeigaben in der frühen römischen Kaiserzeit in Italien und den Nordwest-Provinzen*, edited by Peter Fasold, Thomas Fischer, Henner von Hesberg and Marion Witteyer, 13–28. Köln.
- Hertz, Robert. 1978. *Sulla rappresentazione collettiva della morte*. Roma.
- Hostetter, Eric, Brandt, Ramus and S. Clair, Archer. 1991, "Scavi e scoperte: Palatino. Versante nordorientale." *Bollettino di Archeologia* 9: 47–56.
- Huntington, Richard and Metcalf, Peter. 1985. *Celebrazioni della morte: antropologia dei rituali funerari*. Bologna.
- Karkov, Catherine E., Wickham-Crowley, Kelley M. and Young, Bailey K, eds. 1999. *Spaces of the Living and the Dead. An Archaeological Dialogue*. Oxford 1999.
- La Rocca, Cristina. 1988. "Morte e società. Studi recenti sulle necropoli altomedievali." *Quaderni Medievali* 26: 236–245.
- La Rocca, Cristina. 1989. "Catalogo." In *Materiali di età longobarda nel veronese*, edited by Cristina La Rocca, 53–148. Verona.
- La Rocca, Cristina. 1993. "Una prudente maschera 'antiqua'. La politica edilizia di Teoderico", in *Teoderico il Grande e i Goti d'Italia*, Atti del XIII Congresso internazionale di studi sull'Alto Medioevo, 451–515. Spoleto.
- La Rocca, Cristina. 2007. "Storia di genere e archeologia dell'altomedioevo: note sul dibattito europeo." In *Archeologia e società tra Tardo Antico e Alto Medioevo*. Atti del XII Seminario sul Tardo Antico e l'Alto Medioevo, edited by Gian Pietro Brogiolo and Alexandra Chavarría Arnau, 265–278. Mantova.
- Larsen, Lette. L. 2006. "Takmateriale fra Viborg Søndersø: the Combmaker." In *Archaeology and science in a Viking Age workshop*, edited by Charlie Christensen, Jesper Hjeremind, Mette Iversen and David Earle Robinson, 1018–1030. Aarhus.
- Lasi, Rossella 2002. "Indagini topografiche sulle necropoli di Classe (RA)", *Orizzonti* III: 141–152.
- Leoni, Cristina, Maioli, Maria Grazia and Montevecchi, Giovanna, 2008. "Scavi in aree umide. Le necropoli di Classe, Ravenna." In *Pour une archéologie du rite. Nouvelles perspectives de l'archéologie funéraire*, edited by Jaques Scheid, 89–104. Rome.
- Lucy, Sam. 2000. *The Anglo-Saxon Way of Death*. Sutton.
- MacGregor, Arthur. 2015. *Bone, Antler, Ivory and Horn. The Technology of Skeletal Materials since the Roman Period*. London.
- Maioli, Maria Grazia. 1980. "La cultura materiale romana." In *Analisi di Rimini antica: storia e archeologia per un museo*, 183–185. Rimini.
- Maioli, Maria Grazia. 1984. "Per la conoscenza del periodo dal tardoantico all'alto medioevo in Romagna. Nuovi dati di scavo." In *Culture figurative e materiali tra Emilia e Marche*, edited by Mario Zuffa and Paola Delbianco, 469–487. Rimini.
- Maioli, Maria Grazia. 1986. "Ravenna, loc. Classe; Necropoli." *Studi e documenti di Archeologia* II: 159–161.
- Maioli, Maria Grazia. 1988. "Caratteristiche e problematiche delle necropoli di epoca tarda a Ravenna e in Romagna." *CARB* 35: 315–357.
- Maioli, Maria Grazia. 1989. "Nuovi dati sulle necropoli gote in Emilia Romagna." *CARB* 36: 227–252.
- Maioli, Maria Grazia. 1990a. "La topografia nella zona di Classe." In *Storia di Ravenna*, I. *L'evo antico* edited by Giancarlo Susini, 375–414. Venezia.

- Maioli, Maria Grazia. 1990b. "Classe: La cultura materiale." In *Storia di Ravenna*, I. *L'evo antico* edited by Giancarlo Susini, 415–456. Venezia.
- Maioli, Maria Grazia. 1991a. "Topografia e organizzazione dello spazio nelle necropoli funerarie di Ravenna romana: nuovi dati di scavo." *CARB* 38: 252–280.
- Maioli, Maria Grazia. 1991b. "Strutture economico-commerciali e impianti produttivi nella Ravenna bizantina." In *Storia di Ravenna* II/1. *Dall'età bizantina all'età ottoniana. Territorio, economia e società*, edited by Antonio Carile, 223–247. Ravenna.
- Maioli, Maria Grazia. 1992. "Nuovi dati sul complesso di S. Severo a Classe (RA): scavi 1981–1991." *CARB* 39: 497–520.
- Maioli, Maria Grazia. 1994a. "Oggetti in legno, fibre vegetali e osso." In *Il tesoro nel pozzo. Pozzi deposito e tesaurizzazione nell'antica Emilia*, edited by Sauro Geliche and Nicoletta Giordani, 107–112. Modena.
- Maioli, Maria Grazia. 1994b. "Ravenna e la Romagna in epoca gota." In *I Goti*, 232–251. Milano.
- Maioli, Maria Grazia. 2010. "I chiodi in epoca romana. Utilizzo e significati rituali." In *Sepulture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia Romagna*, edited by Maria Giovanna Belcastro and Jacopo Ortalli, 163–166. Firenze.
- Maioli, Maria Grazia and Stoppioni, Maria Luisa. 1987. *Classe e Ravenna tra terra e mare: città, necropoli, monumenti*. Ravenna.
- Malnati, Luigi, Sassatelli, Giuseppe, Augenti, Andrea and Maioli, Maria Grazia. 2007. "Nuovi scavi archeologici a Classe: campagne 2004–2005." In *Felix Ravenna: La croce, la spada, a vela: l'Alto Adriatico fra V e VI secolo*, edited by Andrea Augenti and Carlo Bertelli, 33–38. Milano.
- Martin-Kilcher, Stefanie. 2000. "Mors immatura in the Roman world: A Mirror of Society and Tradition." In *Burial, Society and Context in the Roman World*, edited by John Pearce, Martin Millett and Manuela Struck, 63–77. Oxford.
- Martorelli, Rossana. 1986. "I corredi tardo-romani (IV- prima metà del VI secolo)." In *L'archeologia romana e altomedievale nell'Oristanese*, 161–170, 178–186. Taranto.
- Maselli Scotti, Franca, ed. 1989. *Longobardi a Romans d'Isonzo: itinerario attraverso le tombe altomedievali* (Mostra tenuta a Romans d'Isonzo Villa della Torre, 15 luglio-17 settembre 1989). Udine.
- Melli, Piera, ed. 1984. *Archeologia in Liguria* II. *Scavi e scoperte 1976–81*. Genova.
- Meneghini, Roberto and Santangeli Valenzani, Riccardo. 2004. *Roma nell'altomedioevo. Topografia e urbanistica della città dal V al X secolo*. Roma.
- Mengarelli, Raniero. 1902. "La necropoli barbarica di Castel Trosino presso Ascoli Piceno." *Monumenti Antichi dei Lincei* XII: 145–380.
- Minguzzi, Simonetta. 1983. "Le gemme incise." In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche a Ravenna e Classe*, edited by Giovanna Bermond Montanari, 200–201. Imola.
- Minguzzi, Simonetta. 1983. "Oreficeria." In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche a Ravenna e Classe*, edited by Giovanna Bermond Montanari, 196–199. Imola.
- Montevecchi, Giovanna, ed. 2004. *Archeologia urbana a Ravenna*. Ravenna.
- Montevecchi, Giovanna. 2010. "Balsamari in epoca romana. Utilizzo e significati rituali." In *Sepulture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia Romagna* edited by Maria Giovanna Belcastro and Jacopo Ortalli, 167–171. Firenze.
- Montevecchi, Giovanna. 2014. "Liverano di Sotto: rinvenimenti di epoca romana e altomedievale." *Studi Romagnoli* LXIV: 27–39.
- Morelli, Anna L. 1999. "Monete da contesti funerari dell'Emilia Romagna. In *Trouvailles monétaires de tombes*, edited by Olivier F. Dubuis, Suzanne Frey-Kupper, Gilles Perret, 169–180. Lausanne.

- Morelli, Anna L. 2003. "Rinvenimenti numismatici di età tardo-antica da contesti archeologici ravennati." In *L'Archeologia dell'Adriatico dalla Preistoria al Medioevo*, edited by Fiamma Lenzi, 552–656. Bologna.
- Murialdo, Giovanni. 2001. "I pettini ad elementi multipli." In *S. Antonino: un insediamento fortificato nella Liguria bizantina*, edited by Tiziano Mannoni and Giovanni Murialdo, 525–529. Firenze.
- Nastasi, Santino and Vay, Isabella. 1978. "Nota sul restauro e sulla tecnica di lavorazione di alcuni pettini ossei di Luni." *Quaderni di Studi Lunensi*: 83–92.
- Negrelli, Claudio. 2004. "Il cimitero altomedievale (VI-VII d.C.)." In *Archeologia urbana a Ravenna*, edited by Giovanna Montevicchi, 122–129. Ravenna.
- Ortalli, Jacopo. 1985. "Un sistema difensivo millenario: dalla cinta tardoimperiale alla Rocca malatestiana: nuovi dati sulle mura di Ariminum." In *Castel Sismondo e Sigismondo Pandolfo Malatesta*, edited by Carla Tomasini Pietramellara and Angelo Turchini, 337–357. Rimini.
- Ortalli, Jacopo. 2010. "Morti inquiete e tombe anomale tra storia, antropologia e archeologia." In *Sepulture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia Romagna*, edited by Maria Giovanna Belcastro and Jacopo Ortalli, 3–37. Firenze.
- Paroli, Lidia. 1996. *Umbria longobarda: la necropoli di Nocera Umbra nel centenario della scoperta, Catalogo della Mostra (Nocera Umbra, Museo Civico, 27 luglio 1996–10 gennaio 1997)*. Roma.
- Paroli, Lidia and Ricci, Marco. 2007. *La necropoli altomedievale di Castel Trosino*. Firenze.
- Pasqui, Angiolo and Paribeni, Roberto. 1918. "La necropoli barbarica di Nocera Umbra." *Monumenti Antichi dei Lincei XXV*: 137–152.
- Patitucci, Stella. 1970. "Comacchio, Necropoli presso l'ecclesia beatae Mariae in Pado Vetere." *Notizie degli scavi*, serie VIII, 24: 69–121.
- Peduto, Paolo. 1995. "Osservazioni sul tiro in epoca medievale." *La parola del Passato: rivista di studi classici* 50, I: 311–318.
- Pellegrino, Angelo. 1999. "I riti funerari ed il culto dei morti." In *Dalle necropoli di Ostia. Riti ed usi funerari*, edited by Angelo Pellegrino, 7–25. Roma.
- Perassi, Claudia. 2001. "Le monete della necropoli: osservazioni sul rituale funerario." In *La necropoli tardoantica. Ricerche archeologiche nei cortili dell'Università Cattolica*, edited by Marco Sannazaro, 101–114. Milano.
- Pluskowski, Aleks. 2010. "Animal magic." *Signals of Belief in Early England: Anglo-Saxon Paganism Revisited*, edited by Martin Carver, Alex Sanmark and Sarah Semple, 103–127. Oxford.
- Rebillard, Éric. 1994. "Église et sépulture dans l'Antiquité tardive (Occident latin, IIIe-VIe siècles)." *Annales. Histoire, Sciences Sociales*, 54: 1027–1046.
- Ricci, Marco. 1997. "Relazioni culturali e scambi commerciali nell'Italia centrale romano-longobarda alla luce dell'officina della Crypta Balbi in Roma." In *La necropoli di Castel Trosino: un laboratorio archeologico per lo studio dell'età longobarda*, edited by Lidia Paroli, 239–273. Milano.
- Ricci, Marco. 2001. "Accessori da toilette (tardo VI-VII secolo)." In *Roma dall'antichità al medioevo. La storia, in Roma dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Saguì, and Laura Vendittelli, 402–407. Milano.
- Ricci, Marco. 2001a. "Produzioni di lusso a Roma da Giustiniano I (527–565) a Giustiniano II (685–695): l'atelier della Crypta Balbi. I materiali delle collezioni storiche." In *Roma dall'antichità al medioevo. La storia, in Roma dall'antichità al medioevo. Archeologia e storia nel Museo Nazionale Romano Crypta Balbi*, edited by Maria S. Arena, Paolo Delogu, Lidia Paroli, Marco Ricci, Lucia Saguì, and Laura Vendittelli, 331. Milano.

- Riemer, Ellen. 2000. "Romanische Grabfunde des 5.-8. Jahrhunderts in Italien.", *Internationale Archäologie*, 57. Rahden.
- Rijkeljkhuizen, Marloes. 2001. "Dutch medieval bone and antler combs." In *Written in Bones*, edited by Justyna Baron and Bernadeta Kufel-Diakowska, 197–206. Wrocław.
- Rizzo, Giorgio, Villadieu, Françoise and Vitale, Micaela. 1999. "Mobiliers des tombes VIe-VIIe siècles: mises au jour sur le Palatin (Rome, Vigna Barberini)." *Mélanges de l'École française de Rome. Antiquité* 111, 1: 351–403.
- Rupp, Cornelia. 1996. "La necropoli longobarda di Nocera Umbra (loc. Il Portone): l'analisi archeologica." In *Umbria longobarda: la necropoli di Nocera Umbra nel centenario della scoperta, Catalogo della Mostra (Nocera Umbra, Museo Civico, 27 luglio 1996–10 gennaio 1997)*, edited by Lidia Paroli, 23–40. Roma.
- Rupp, Cornelia. 1997. "La necropoli longobarda di Nocera Umbra: una sintesi." In *L'Italia centro-settentrionale in età longobarda*, edited by Lidia Paroli, 167–183. Firenze.
- Schoolmann, Edward M. 2013. "Reassessing the Sarcophagi of Ravenna." *Dumbarton Oaks Paper* 67: 49–74.
- Schwindenhammer, Isabelle. 2009. "Approche diachronique des sépultures de Tout-petits: exemple de la nécropole Grecque et Romaine de Sainte-Barbe", *Rencontre autour de la mort des tout-petits. Mortalité foetal et infantile*, 67–78. Saint-Germain-en-Laye.
- Spain, Christian. 1999. "Architecture and Funerary Space in the Early Middle Ages." In *Spaces of the Living and the Dead: An Archaeological Dialogue*, edited by Catherine E Karkov, Kelley M. Wickham-Crowley and Bailey K. Young, 39–60. Oxford.
- Stevens, Susan. 1991. "Charon's Obol and Other Coins in Ancient Funerary Practice." *Phoenix*, 45: 215–229.
- Stoppioni, Maria Luisa. 1983. "Le anfore." In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche a Ravenna e Classe*, edited by Giovanna Bermond Montanari, 130–146. Imola.
- Torcellan, Michela. 1986. *Le tre necropoli altomedievali di Pinguente*. Firenze.
- Travaini, Lucia. 2004. "Sovrani e santi sulle monete italiane medievali e moderne. Contributo per il lessico iconografico numismatico." In *L'immaginario e il potere nell'iconografia monetale*, 137–152, Milano.
- Travaini, Lucia. 2007. *Monete e storia nell'Italia medievale*. Roma.
- Valenti Zucchini, Giselda and Bucci, Mileda. 1968. *Corpus della scultura paleocristina bizantina ed altomedievale di Ravenna, II. I sarcofagi a figure e a carattere simbolico*. Roma.
- Van Es, Willem and Verwers, Willem eds. 1980, *Excavations at Dorestad I, the Harbour: Hoogstraat I*. Amersfoort.
- Ward Perkins, Bryan. 1977. "Lo scavo nella zona Nord del Foro." In *Scavi di Luni*, 2, edited by Antonio Frova, 633–638, 664–671. Roma.
- Ward-Perkins, Bryan. 1999. "Re-using the architectural legacy of the past, entre idéologie et pragmatisme." In *The Idea and Ideal of the Town between Late Antiquity and the Early Middle Ages* (The transformation of the Roman World, 4), edited by Gian Pietro Brogiolo and Bryan Ward-Perkins, 225–244. Leiden/Boston/Köln.
- Williams, Howard. 2007. "Transforming body and soul: toilet implements in Early Anglo-Saxon graves." In *Early Medieval Mortuary Practices* (Anglo-Saxon Studies in Archaeology and History 14) edited by Sarah Semple and Howard Williams, 66–91. Oxford.
- Williams, Howard. 2010. "Engendered bodies and objects of memory in final phase graves." In *Burial in Later Anglo-Saxon England c. 650–1100 AD*, edited by Jo Buckberry and Annia Cherryson, 26–37. Oxford.

Chiara Guarnieri

9 Ravenna, Classe and its Surroundings: Pottery as a Mirror of Everyday Life

Abstract: Pottery can be considered not only as an object of study of typological details, materials and shapes, but also as an important source of information about economic, political, cultural and social aspects of a given society. The aim of this contribution is the analysis of pottery from the 4th to the 8th century, based on the Ravenna and Classe archaeological contexts, examining imports and local productions. Attention will also be paid to the situation in the Exarchate, the area surrounding Ravenna, in particular the eastern part of the Emilia Romagna region. Finally, general remarks will be made about the reasons for the changes, continuity and discontinuity over the period under scrutiny. The contribution is based on present state of knowledge, but obviously archaeological research is ongoing and interpretations are continuously being updated.

Pottery can be considered not only as an object of study of typological details, materials and forms, but also as an important source of information about economic, political, cultural and social aspects of a society at a certain time.¹ The aim of this paper is not to make a summary of all available archaeological information about ceramics production in the Byzantine world but to briefly take into consideration, from an archaeological point of view, the types of ceramics existing in Ravenna, its surroundings and in the hinterland near it, Romagna, to give an idea of the trade affecting this area in the period between the 5th and the 8th century A.D.

The contribution starting from the Ravenna and Classe contexts, examines imports and local productions; after that, we will discuss the situation in the Exarchate, the area surrounding Ravenna, in particular the east part of Emilia Romagna. Then we will make general considerations regarding the reasons for the changes, continuity and discontinuity over the period considered. The subject is very complex; obviously the archaeological research is still on-going and we are continuously updating our interpretations. In order to give an idea of the discussion about these topics at the end of this article an essential bibliography divided into subjects will be given. By analysing Ravenna and its surroundings, we will take into consideration only the ceramic productions documented in this area; we will omit the other finds like, for instance, glass, because ceramics are a more reliable archaeological indicator of commercial trades. For the sake of brevity and to put it as clearly as possible,

¹ See Zanini 2006.

we will separate the period we are focusing on into four sub-periods corresponding to a notable change in archaeological data: 1) from mid-5th to mid-6th century; 2) the second half of the 6th century; 3) the 7th century; 4) the 8th century.

Cassiodorus's *Variae* repeatedly mentions the importance of the role of Ravenna (and as a consequence Classe) in trade with Constantinople; he underlines the quantity of goods which could be found in the town:² this is clearly shown in archaeological documentation. In this period Classe and Ravenna see the dominance of North Tunisian vessels, in particular African Red Slip Ware (ARSW) from Byzacena and Zeugitana, now Tunisia.³ In Classe 75% of total sherds of ARSW was found which became only 40% in the following period.

This production is characterised by Hayes 85 B bowl, which is very common in Classe but rare in the rest of Italy (Fig. 1); dishes H76, H 84, and the cup H81b are also found (Fig. 2). In addition there are numerous mould decorated north African lamps (Hayes 2A, Fig. 3). In Classe we found a local production that imitated this form; the kilns were situated in Sant'Arcangelo, near Forlì.⁴ The lamps that come



Fig. 1: Cup Hayes 85 b (redrawn by Soprintendenza Archeologica, Belle Arti e Paesaggio per la città metropolitana di Bologna e le province di Modena, Reggio Emilia e Ferrara, henceforth SABAP-BO).

² Gatto 2005, 275–276.

³ Tortorella 1998; Mackensen 1998.

⁴ Maioli 1993.

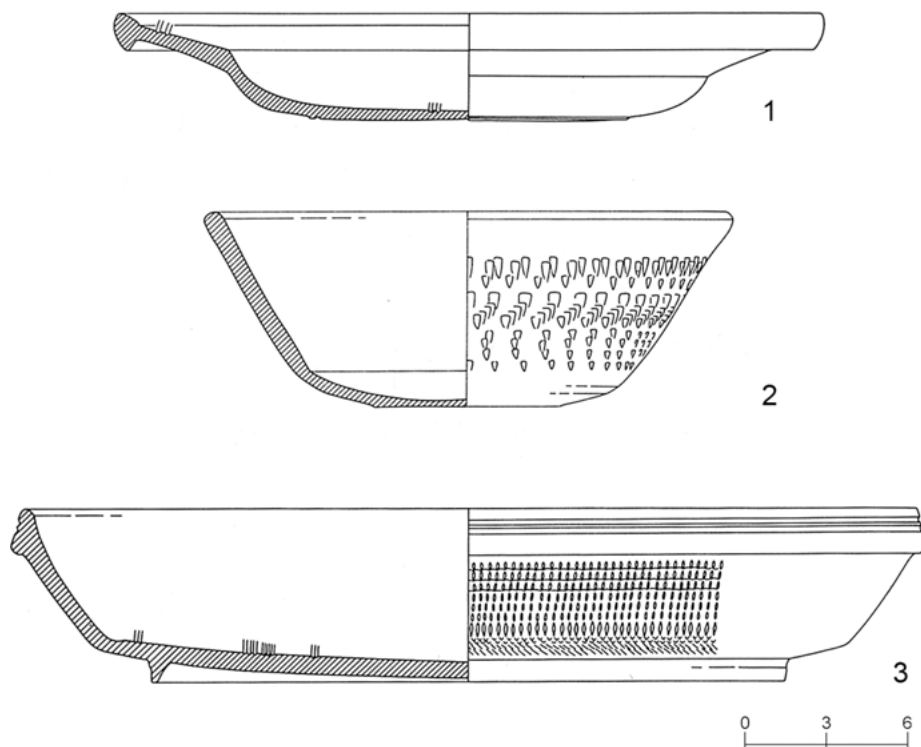


Fig. 2: Dishes Hayes 76,84; cup Hayes 81 (redrawn by SABAP-BO).

from this kiln-site were made in soft clay and their decoration is not so well finished because the moulds had been used for a long period.

The majority of amphorae come from the eastern Mediterranean (LRA, 1, 3, 4, 5/6);⁵ the remain come from Tunisia (Keay 62, Kaey 26) (Fig. 4). There is no documentation about a local production of amphora (so-called Forlimpopoli type), which was very common in the previous century. LRA1 is perhaps the commonest among Late Roman amphorae produced in the eastern Mediterranean, (Cyprus, Cilicia and Rhodes) and used for olive oil and wine. It is very common in the north Adriatic region (Aquileia, Trieste) but not so widespread in inland regions. The quantity comparable to Ravenna is found in Butrint and Durres (Albania), particularly between the end of the 5th and the first half of the 6th century.⁶

The LRA3 amphora was produced in western Turkey, around Ephesus or Sardis, and in the Aegean islands. It is a small amphora which is very common in Ravenna

⁵ Arthur 1998.

⁶ Cirelli 2007.

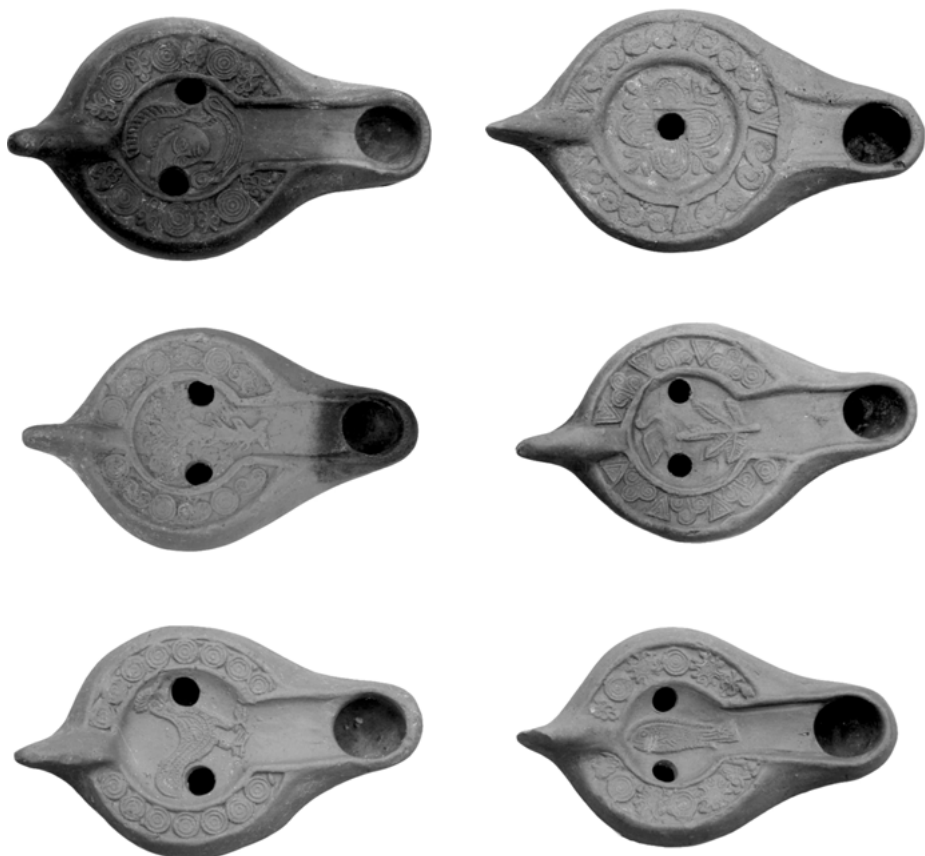


Fig. 3: Hayes 2A lamps (photo SABAP-BO).

and Classe and also in the central Adriatic region (Pescara). Much rarer in south Italy, however we found a concentration of these amphora in Agnuli villa (south Italy, Apulia) in association with Phocian Red Slip Ware. The same association is present also in Classe (see below). The amphora LRA4 was produced in Askelon and Gaza and exported high quality wine; it is the most common type in Classe with 20% of total sherds. It is also very widespread in north Adriatic regions (Torcello, Concordia, Oderzo, Ibligo, Cividale). The amphora Keay 52 comes from south Italy (Calabria) and is found in all the Adriatic Gulf from Aquileia and Capodistria in the north to Croatia and Albania in the south even if in small quantities. It appears with some variations, such as slightly different rims or handle forms.⁷

⁷ Pacetti 1998.

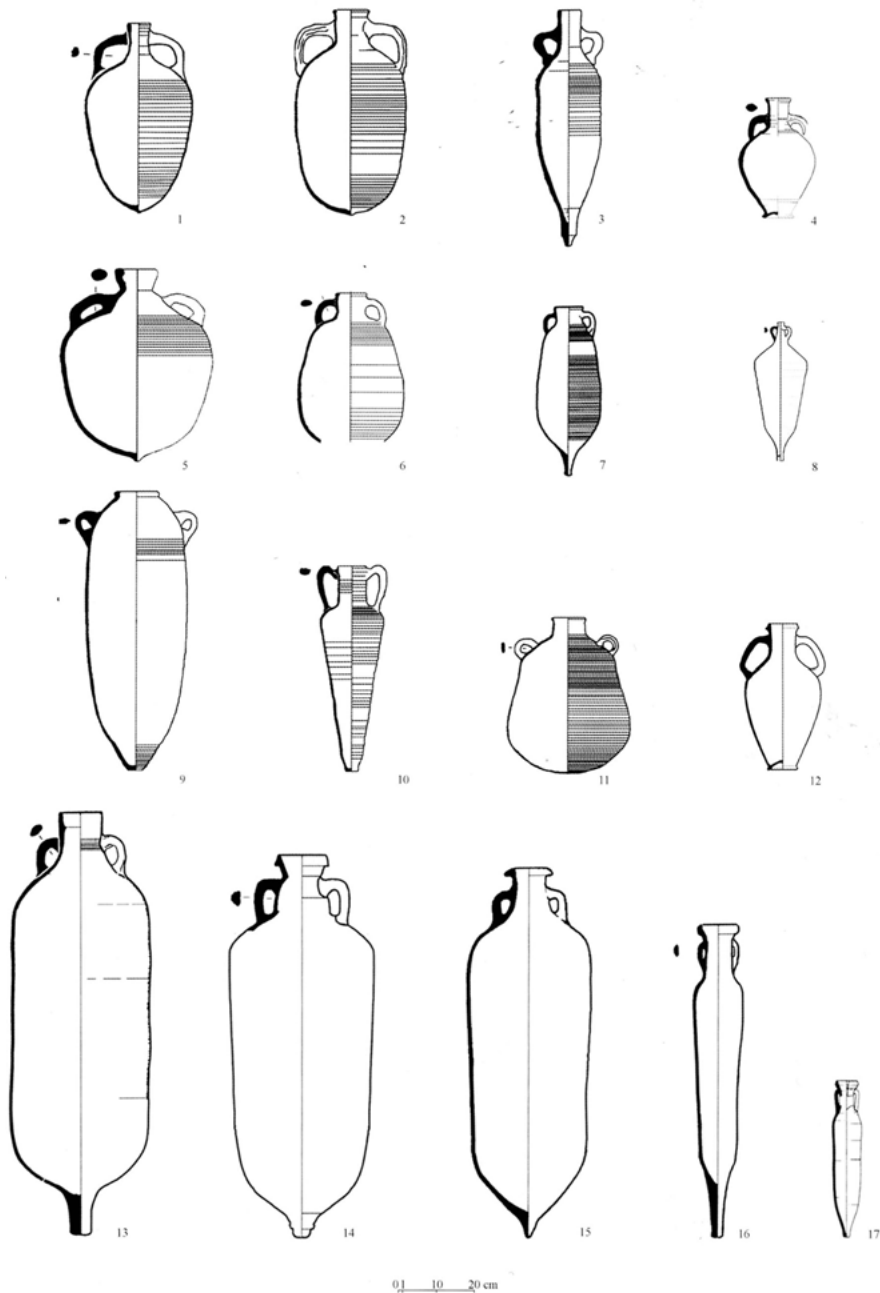


Fig. 4: Nn. 1–12: *Eastern amphorae* (1. LR1/A, 2. LR1/B, 3. LR7, 4. Nubian Jug, 5. LR2, 6. Agorà M273, 7. Samo's cistern type, 8. LR3, 9. LR4, 10. Agorà M334, 11. LR5, 12. Keay 52). 13–17: *African amphorae* (13. Keay 55, 14. Keay 62, 15. Keay 35, 16. Kaey 26) (after CIRELLI 2007).

This situation remains the same in the first part of the 6th century, when Africa is still the most important supplier of Ravenna. However, the quantities of goods are reduced: probably these supplies were destined for the local elites both laic and ecclesiastic. In this period, in addition to LRA 1, 3, 4 and Keay 52 mentioned above, there are a lot of east Mediterranean amphorae, e.g. LRA 2, 5, 7 and Agorà 334. LRA2 is a globular amphora type and was produced in the Aegean Islands having a good distribution in the south Adriatic region (Pesaro, Pescara). The LRA 5, bag shaped, a product of the area of Caesarea Maritima, is rarer in Classe; also LRA7, an Egyptian amphora not so common, it is only 1% of the total sherds. In Classe, Agorà M 334, one of the least common Palestinian amphorae, carrot shaped, is also rare (the same 1%): it is found in Trieste, Croatia and Albania (Durres, Butrint). Agorà M 273, common in the Aegean and the Black Sea from around the 3rd to the 6th century, is found in a few examples from Italy, concentrated mainly in the Adriatic region; in Classe a low percentage (1%) was present. Here we also find a small jug that was produced in Nubia, probably transported with Coptic cloth. This jug is not so common; it has been found in Naples and Corinth, in Greece. Spatheion Keay 26g is a small-size amphora often presents, like Samos Cistern type, in fortified sites: its origin is still debated. Some of them were produced in north Africa and were used to carry goods like perfume, spices and sauces. In Classe and Ravenna we also find Keay 62.

Among ARSW from Tunisia, the cups H81b, H85b and the dish H 84 are still present, while a new form, the cup H 91c appears during the 6th century (Fig. 5). Phocean Red Slip Ware (Fig. 6) is quite common in Classe.⁸ This connects Classe with the site of Agnoli in south Italy where there is also a great number of LRA3. Such a connection demonstrates that Ravenna could have been the final destination of this type of goods (amphorae and Red Slip Ware), that probably travelled with alum rock, used to fix dyes. In the rest of north Italy Phocean RSW is very rare. In this production we find very big serving dishes (45 cm diameter) that imitated those in metal. These were used

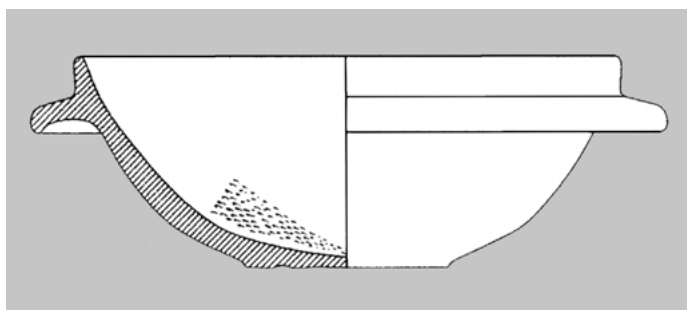


Fig. 5: Cup Hayes 91C (redrawn SABAP-BO).

⁸ Martin 1998.

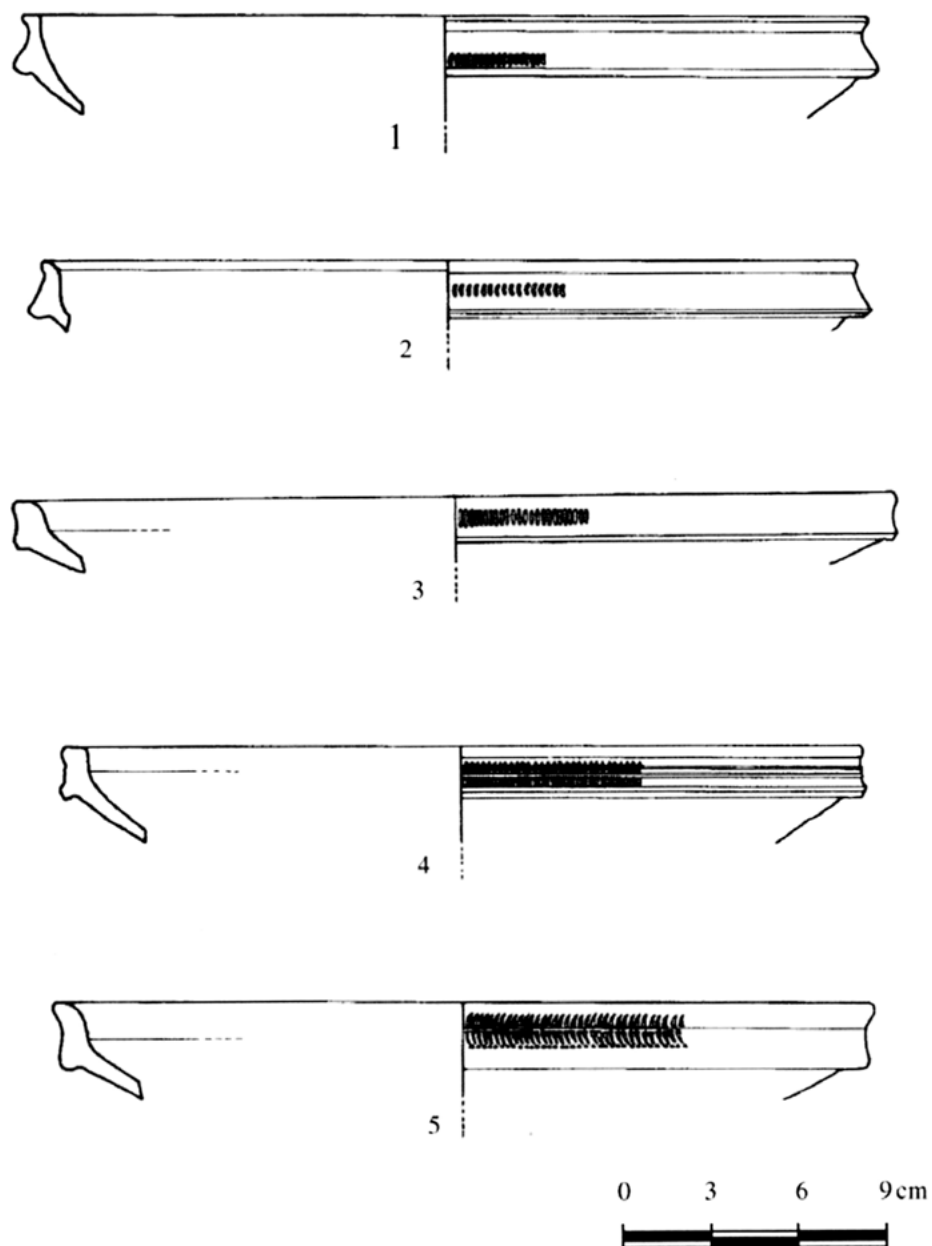


Fig. 6: Phocian RSW Hayes 3 from Classe (after Augenti, Cirelli *et al.* 2007).

during banquets instead of individual vessels. In Ravenna and Classe there are also a lot of red painted jugs (LRJ 1 = Riley Late Roman Jug 1) that were one of the most common vessels in this period in Cyrenaica and Spain (Fig.7).⁹

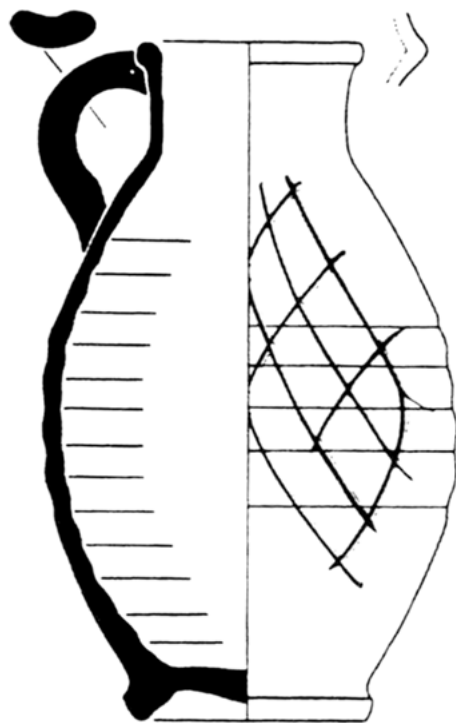


Fig. 7: Late Roman Jug, Riley 1 (redrawn SABAP-BO).

In Ravenna and Classe there are also some closed vessels like Sardis jug, that were produced in East Mediterranean, that have been found in sites from Egypt up to Anatolia (Fig. 8). Palestinian *unguentaria* are also very common in Classe (Fig. 9).

The number of lamps (Hayes IIA) is still the same as in the middle of the 6th century. The local production of fine wares is represented by red slip ware (dishes, cups and jugs) (Fig. 10). In this period glazed pottery increases its presence and in its production we recognize different types of jugs, one of which is scale decorated (so called “Classe Type”) and another is a mortar (Fig.11);¹⁰ this production continues until the mid-7th century. The cooking ware is represented by casserole Fulford 38; this type of vessel was produced in the Palestinian area and is widely found in several Mediterranean areas, such as Spain (Fig. 12).

⁹ Reynolds 1995.

¹⁰ Gelichi/Maioli 1992.



Fig. 8: Sardis jug from Classe (photo SABAP-BO).



Fig. 9: Palestinian *unguentaria* from Classe (photo SABAP-BO).

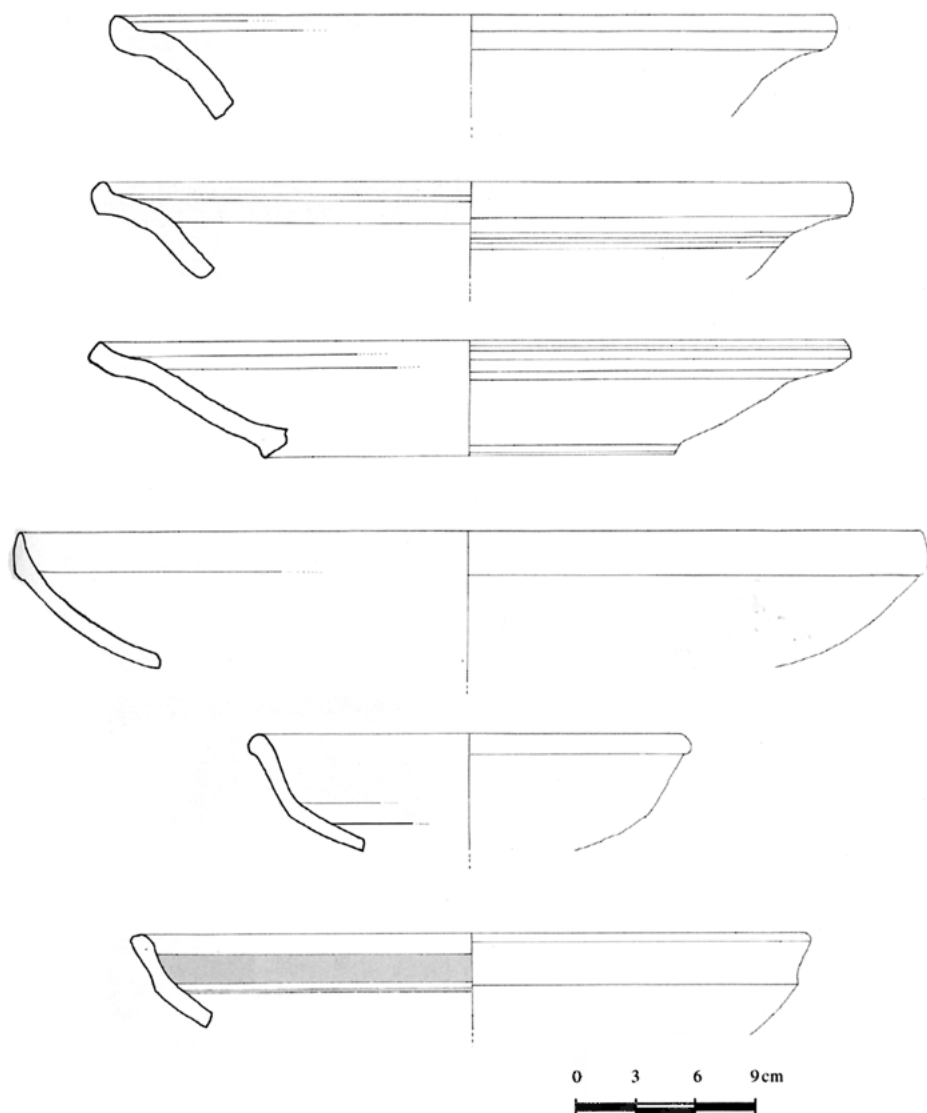


Fig. 10: Red Painted Ware from Classe (after Augenti, Cirelli *et al.* 2007).

After the Byzantine conquest of Africa, the control of maritime routes is directed from Constantinople. Therefore, in this period, due to the political situation, most of the goods come from the east Mediterranean area. The goods produced in Africa were also controlled by the Byzantines: this is confirmed by numerous wrecks in which African and east Mediterranean vessels have been found together.

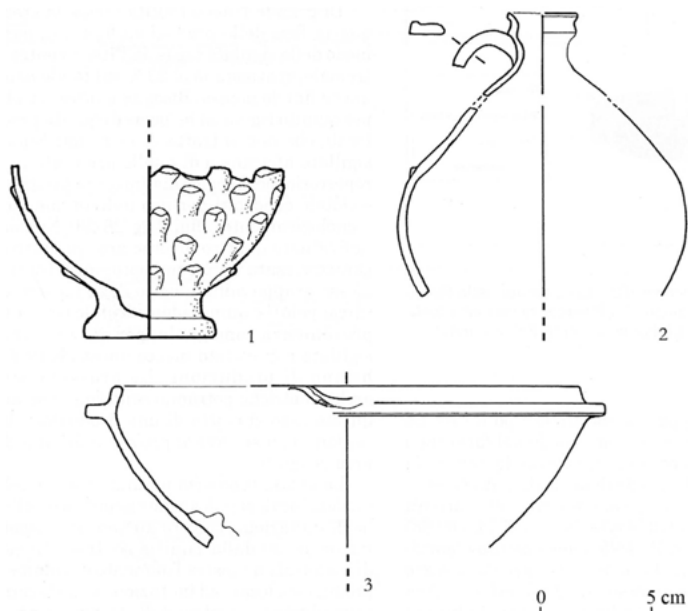


Fig. 11: Glazed pottery (after Gelichi, Maioli 1992).



Fig. 12: Casserole Fulford 38 from Classe (photo SABAP-BO).

In Classe and Ravenna we notice the reduction of 40% of ARSW; we now find Hayes 61 B (Fig. 13) Hayes 104 A dishes (Fig. 14). In this period Phocian Red Slip Ware is still well documented, in particular H3 dishes. There are also jugs, flat cooking vessels and casseroles from the east Mediterranean area, as well as lamps from Tunisia and the jug Agorà M273.

There are the same types of amphorae that we saw previously which for the most part come from the east Mediterranean area (LRA1, LRA2, LRA 3, LRA 4, LRA 5/6) and

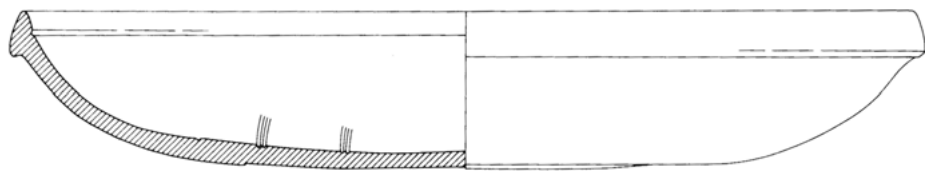


Fig. 13: Dish Hayes 61 B (redrawn SABAP-BO).

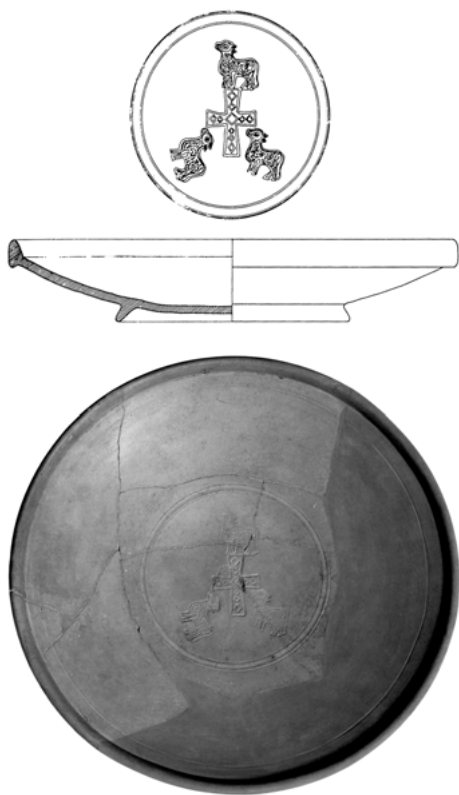


Fig. 14: Dish Hayes 104 A (redrawn SABAP-BO).

a few finds from southern Italy (Keay 52). We note the increase of local production of fine tableware (open and closed vessels) with new forms that did not imitate the African products, sometimes with painted brown decoration. There is also a local production of lamps. The analysis of the composition of clay demonstrates that fine tableware and lamps have a common site of production, the kilns of Sant' Arcangelo.

In Ravenna and Classe the archaeological contexts of this period indicate a change in cooking vessels. Along with African and Middle East products two new types now appear: a casserole with a fold rim¹¹ and a coarse ware olla, a closed cooking pot that could be kept on the boil for a long time.¹² The olla, attested not only in the regional context but also in Venice (S.Pietro in Castello) and Rome (Crypta Balbi), was probably made in the Ravenna area (Fig. 15–16). In this period, a cooking pot made of Alpine soapstone appears too. The material with which it is produced indicates a new trade route with north Europe.



Fig. 15: Olla from Classe (photo SABAP-BO).

In the 7th century, there is a contraction of bulk exchange because of an economic crisis affecting both Byzantine and Lombard towns. Dwindling of overseas trade implies a reduction of ceramic imports in Mediterranean ports.¹³ In Classe, the archaeological evidence documented a slow decline of the same harbour infrastructures: the inner space of the storehouses is now divided and built completely in wood; some spaces are now used as a burial place. There is a modification in the role of Ravenna and Classe from an exchange and distribution centre into an area of consumption.

There is a significant reduction in the quantity of imported ceramics. In the mid-7th century the decline of trans-maritime trade led to the total disappearance of ARSW,¹⁴ while local production increased. An example of this is the lamps Provoost 10, a mould of which has been found in Classe. This type of lamp is widespread in Italy, e.g. in Rome and Naples (Fig. 17). We find a lower number of Red slip fine

¹¹ Cirelli 2015, 19.

¹² Gelichi 1983; Gelichi 1998.

¹³ Wickham 2009, 708–824.

¹⁴ Tortorella 1998, 57.

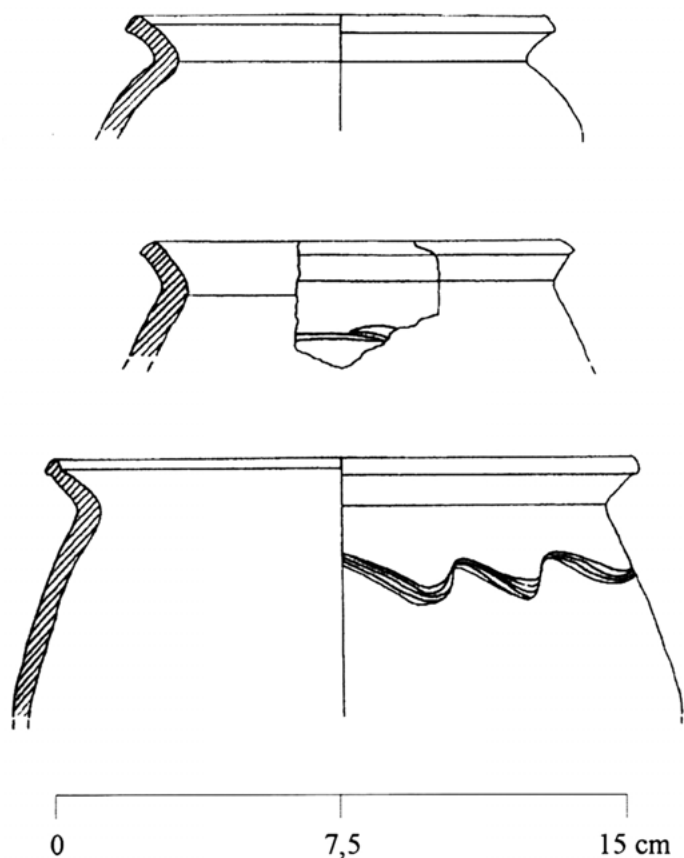


Fig. 16: Ollae “Classe type” (after Augenti, Cirelli *et al.* 2007).

tableware and glazed ware. In Classe the amount of amphora was reduced by about one 5th in comparison with the previous period.¹⁵ There are fewer African amphorae (Keay 62, Keay 56 e spatheia) in comparison with the abovementioned examples coming from the East Mediterranean (LRA 3, LRA 4, LRA5, Agorà M344, LRA 7, Agorà M273). The most documented type of them is LRA 3. In this period we find a new type of amphora, the the so-called ‘Samos’s cistern type’, named after its discovery in a cistern on the Greek island of Samos. This type of amphora is also found in the major Byzantine towns and castra.¹⁶ There are also Keay 52 from the south of Italy.

¹⁵ Cirelli 2009.

¹⁶ Arthur 1998.



Fig. 17: Mould of Provoost 10 lamp from Classe (photo SABAP-BO).

During the 7th century we notice two phenomena: a) amphorae become smaller; b) a new form of container appears, the so-called Globular amphora, that was inspired by particular eastern Mediterranean forms, especially LRA 1, 2. This type of carrier, widely produced in the eastern Mediterranean and in southern Italy, is a very important indicator. Archaeologists have formulated different hypotheses about its appearance and the changing of amphora shape; we notice that Globular amphorae are lighter than the other types of amphorae (20 kg not 80 kg). The reduced size is suitable for small ships like the Byzantine ones and can be easily transported by road.¹⁷

Regarding cooking vessels, we observe that casseroles disappear; coarse ware ollae Classe type and Alpine soapstone pots are the only cooking vessels found in this period in the archaeological context in Ravenna and Classe (Fig. 18).

In the 8th century a great modification of the ceramic contexts is witnessed. New types of ceramics now appear such as the fine tableware and painted ceramics. Cooking vessels continue to be made from coarse ware and Alpine soapstone. The total number of amphorae in Classe is now 20% less than in the 6th century; there are only Globular types that probably come from southern Turkey, Tunisia and southern Italy. At the moment is not possible to determine their origin with certainty because their shapes are very similar. We found these amphorae in the north Adriatic area along the coast (Rimini, Cervia, Comacchio, Venice)¹⁸ (Fig. 19). In Classe there are also Crypta Balbi type amphorae.

With regards to the hinterland of Ravenna in the period between the 5th and the 8th centuries we take into consideration archaeological deposits with a reliable

¹⁷ Zanini 2003; Zanini 2006.

¹⁸ Negrelli 2012.

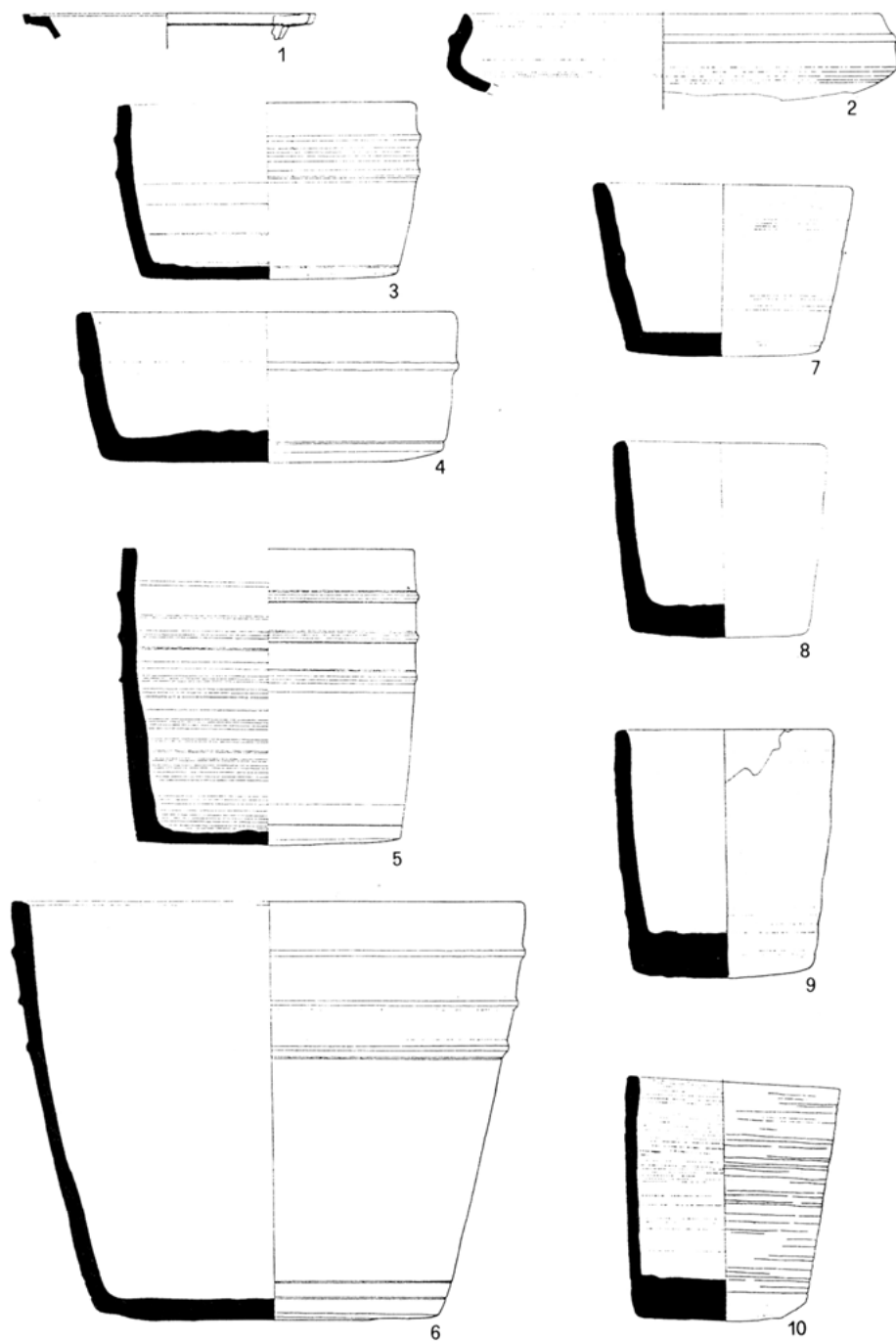


Fig. 18: Alpine soapstone. (redrawn SABAP-BO).

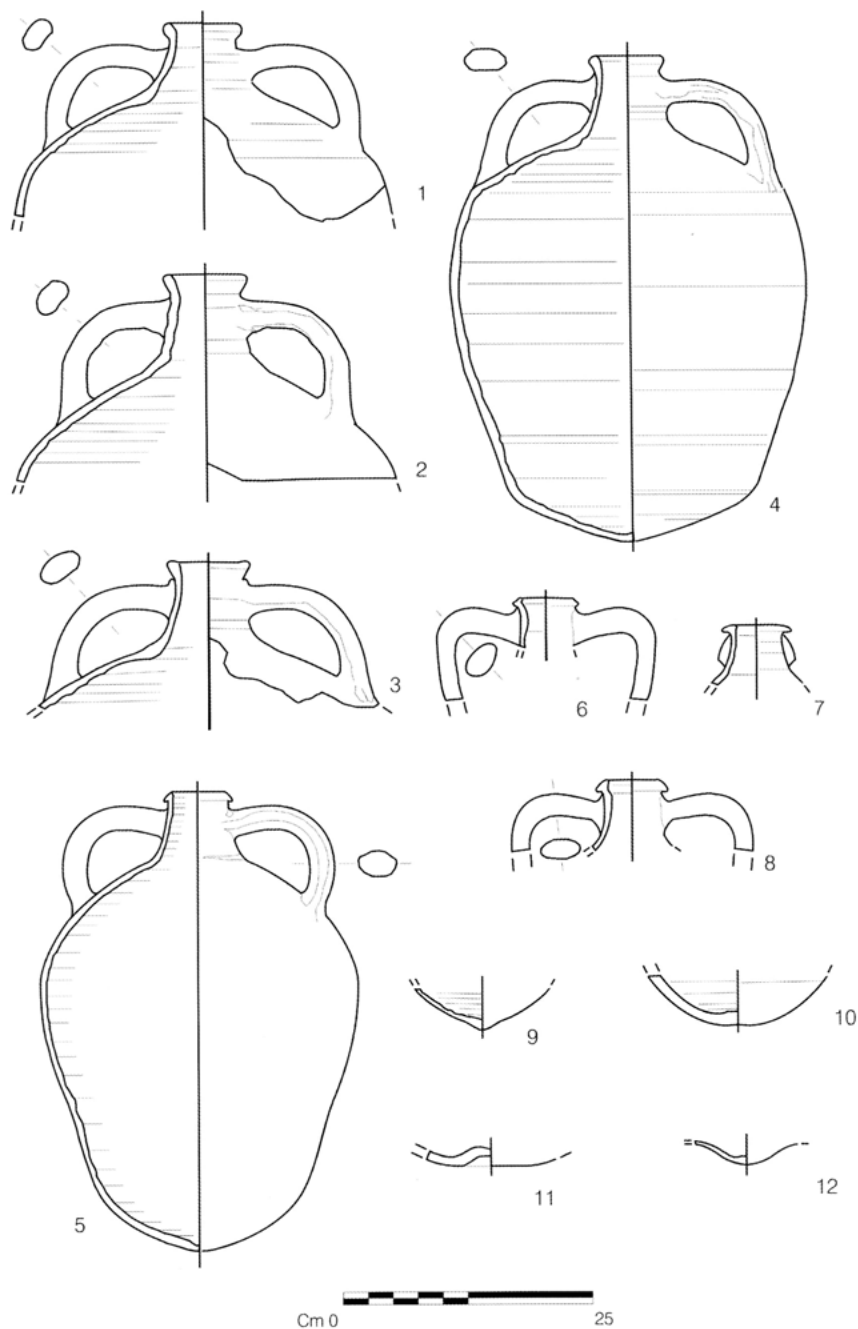


Fig. 19: Globular amphorae (after Negrelli 2007 a).

stratified chronological sequence. The territory examined corresponds to the area of the Exarchate, a part of which is now Romagna (Imola-Villa Clelia, Faenza, Rimini, Cervia/S.Martino *prope Litus Maris*, Russi, Comacchio, Vecchiazzano). After a period of economic stagnation in the 3rd and 4th centuries, in the 5th and 6th centuries there is a growth in ceramic production, with various techniques and forms. It is very interesting to note that this economic change could be connected to what happened in rural areas during the Roman Empire where family farming, typical of the Early Imperial Age, shifted to a system of vast properties.

From mid-5th century to mid-6th century, imports in Ravenna hinterland are less common than regional productions both in rural and urban areas, but African production is well represented also in the hinterland (Faenza, Rimini, Pentapolis, along the Adriatic coast, Pescara). Ravenna and Classe show a different situation because in this period they have the function of distributing goods in the Po Valley. In this period, we dispose of a very small sample of trustworthy archaeological contexts. These give us a few examples of amphorae. There are four times more Eastern amphorae than African, particularly around the middle of the 6th century. In Emilia Romagna and in other regions of north Italy local amphorae production does not exist in rural contexts. What is the meaning of this? Probably wine is conserved in different vessels (maybe barrels) or it could be a sign of a change in the type of production.¹⁹

Dealing with local manufacture we notice a remarkable production of fine painted tableware. There are open and closed shapes, red painted and sometimes moulded decorated. Archaeologists do not agree on the name of this production (local red slip ware, painted ware, imitation of red slip ware, etc.). This production replaced the so-called “Medioadriatica” ware,²⁰ a type of sigillata decorated with brown painted marks. Its production began around the end of the 2nd century and totally disappears at the end of the 5th century when it was replaced with ARSW imitations, the production of which was stimulated by the wide diffusion of African vessels. The great quantity of African products inspired local workshops to make copies at a lower cost; for this reason, local products which imitated African vessels are widespread in the whole Romagna.²¹ The difference between the goods that were used by the elites and the lower class has to be seen in both quality and quantity.²² Hayes 61, in particular, is very common and could be considered a marker for late antique contexts (Fig. 20). it is possible to find this dish both in urban and in rural sites. What is the reason for this success? Probably it comes from its simple form that permits it to be used both for liquid and solid meals. This versatility is very important because it was not necessary for a consumer to have many different vessels for

¹⁹ Negrelli 2004; Negrelli 2015.

²⁰ Stoppioni 2015.

²¹ Fontana 1998, 96–97.

²² Negrelli 2007, 321.

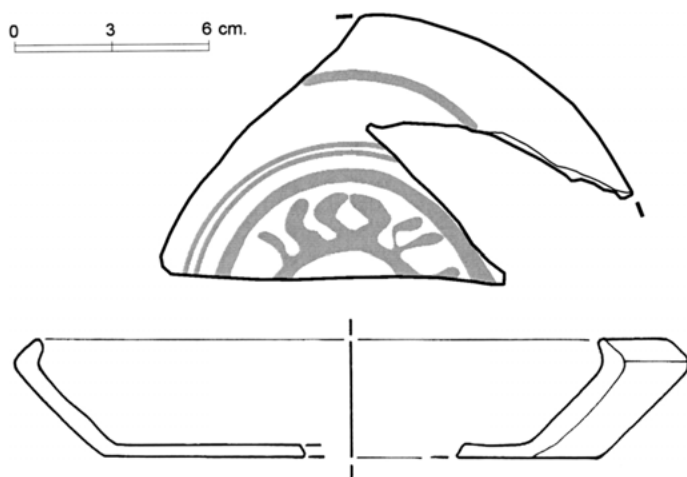


Fig. 20: Dish Hayes 61 from Faenza (after Guarnieri *et al.* 2004).

different uses. We observe in one site, Imola, a notable quantity of Hayes 61,²³ that are very rare in other areas in the north Italy.²⁴ This is probably due to the fact that Imola is near Ravenna from where these goods were distributed.

In the 6th century, painted ceramics spread in the area under question. They consist mainly of closed shapes, represented by jugs with one or two handles that come from pits in rural areas near Ravenna and Bologna (Russi (RA), Vecchiazzano (FC), Orto Granara, Bubano, Castel S. Pietro (BO) (Fig. 21). It is very interesting to note that those sites do not give us any amphora at all. Painted ceramics characterized the east part of Emilia Romagna, in particular the sites along the coast (Rimini, Cesena, Imola, Comacchio) where they all appeared in the same period (Fig. 22).²⁵

A local production of lamps is attested, sometimes in red slip, documented by moulds and kilns found in Sant'Arcangelo (Forlì). They were an imitation of African models (Hayes II A) in different variations. This production, together with fine tableware, increases from the middle of the 5th century onwards (Fig. 23).

There is some glazed pottery in Imola and Comacchio, and very little near Ravenna, apart from Classe, which was probably a production centre. The quantity in the 5th century is less than in the 4th; now we have only two types of vessels: jugs with decoration and mortars. This pottery is considered to be local production and was not the object of long-distance trade.²⁶

²³ Curina *et al.* 1990.

²⁴ Tortorella 1998, 53; Negrelli 2007, 309.

²⁵ Negrelli 2015.

²⁶ Brogiolo/Gelichi 2007.

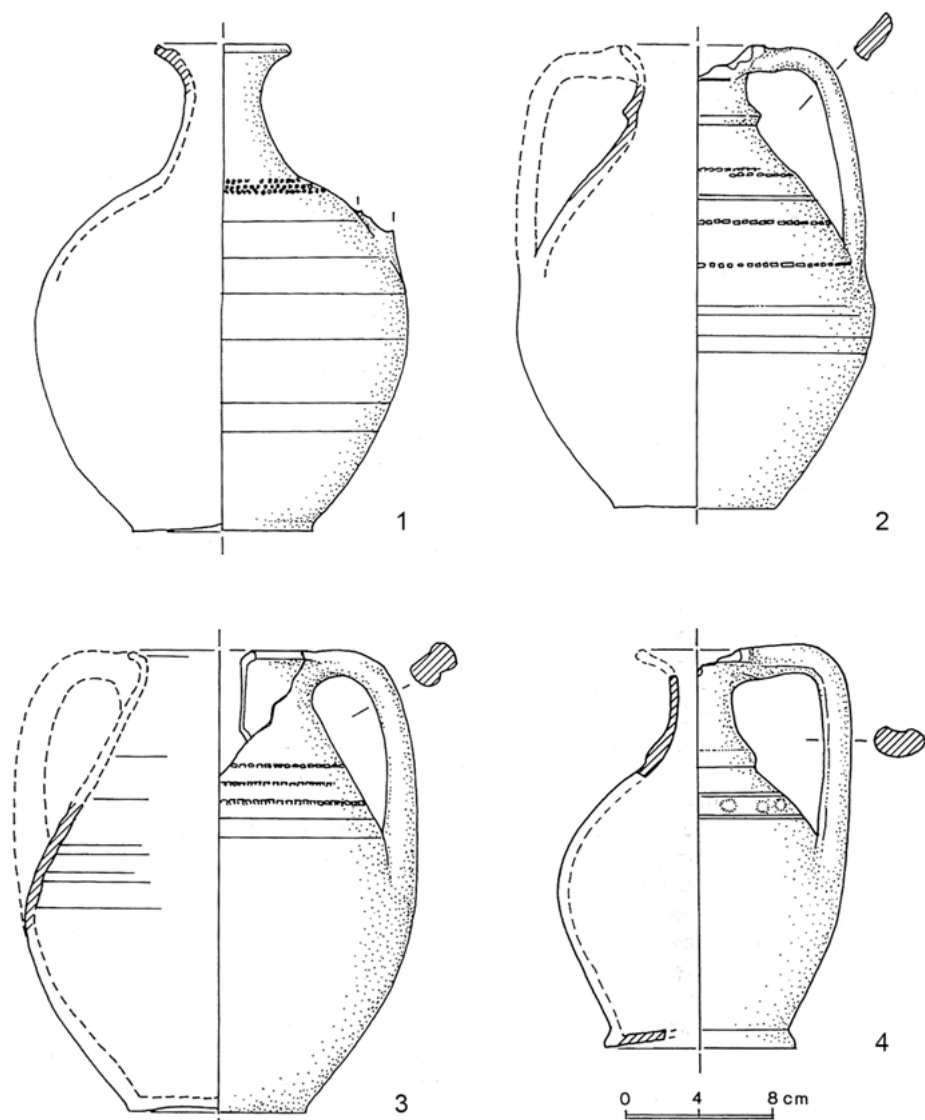


Fig. 21: Red Painted Ware from Castel S. Pietro, BO (after Curina, Negrelli 1998).

We have only three forms of coarse ware: *ollae* Classe type, flat cooking vessels and *clibani*, portable bread ovens (Fig. 24). In this cooking ware there are two types of production, hand and potter's wheel made. Probably this situation reflects the

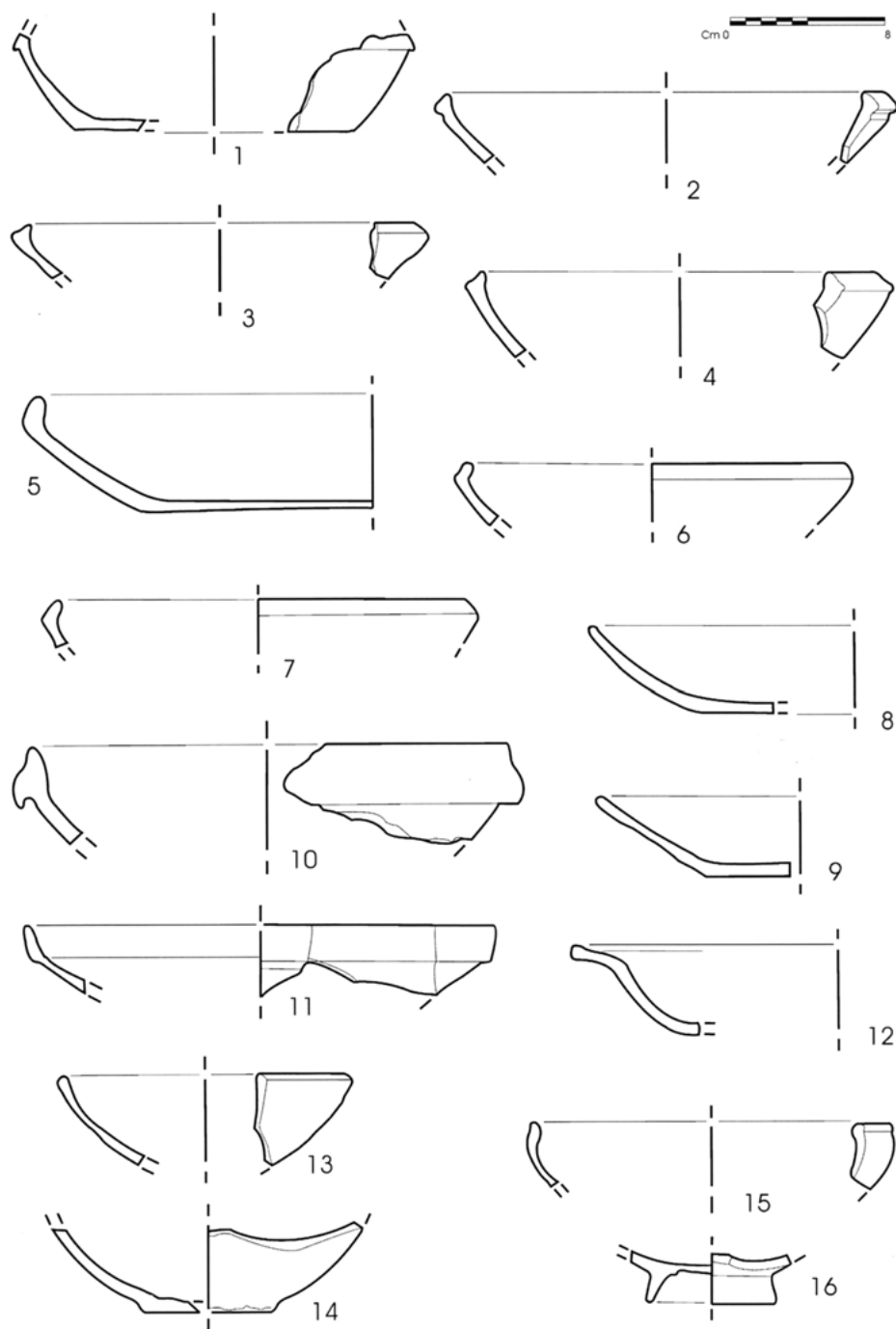


Fig. 22: Red Painted Ware from Rimini, Cesena, Imola, Comacchio (after Negrelli 2007).

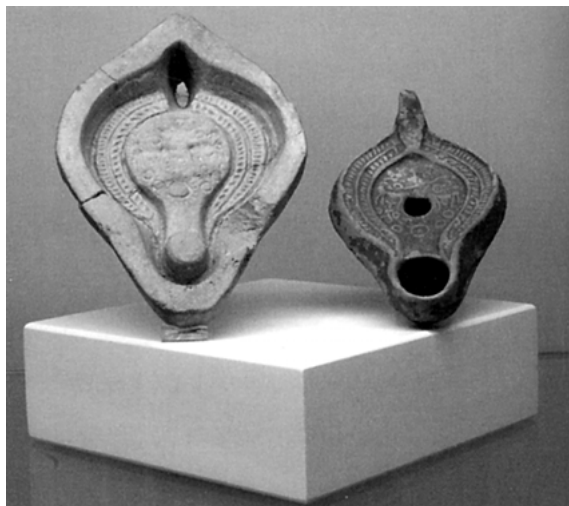


Fig. 23: Mould and lamp imitation of Hayes 2 from Sant'Arcangelo (photo SABAP-BO).

two different economic spheres, that is to say household industry and household workshop, as stated by Peacock.²⁷

During the lapse of time from late 6th to the 7th century, the sites along the Adriatic coast (Comacchio, Cervia, Rimini) experienced a decrease in imports while the latter are totally absent in inland areas. From the beginning of the 7th century the imports of ARSW completely stop. Local Red Slip painted ware also decreased and we notice that the production of glazed pottery has a change in its distribution compared with the previous century: now glazed pottery is rare in the western parts of the Po Valley but it reappears in the eastern zone. The forms and treatment of the surface are now different, with spotted glaze; this fact allows us to compare this production with other typologies of central Italy.²⁸

Regarding amphorae, there is still the presence of eastern production: LR 1–4, Samos cistern Type and also Keay 52. At the end of the 7th century Globular amphorae of eastern production will be the majority. There are also a few lamps Proovost 10B from Sicily.

We can see that there are now only few forms of cooking vessels in coarse ware: ollae Classe type and *clibani*. In this period in some sites in Romagna we note the appearance of a new type of coarse ware characterised by engraved lines, often

²⁷ Peacock 1982; Gelichi 1998; Negrelli 2007.

²⁸ Brogiolo /Gelichi 1997; Brogiolo /Gelichi 1998.

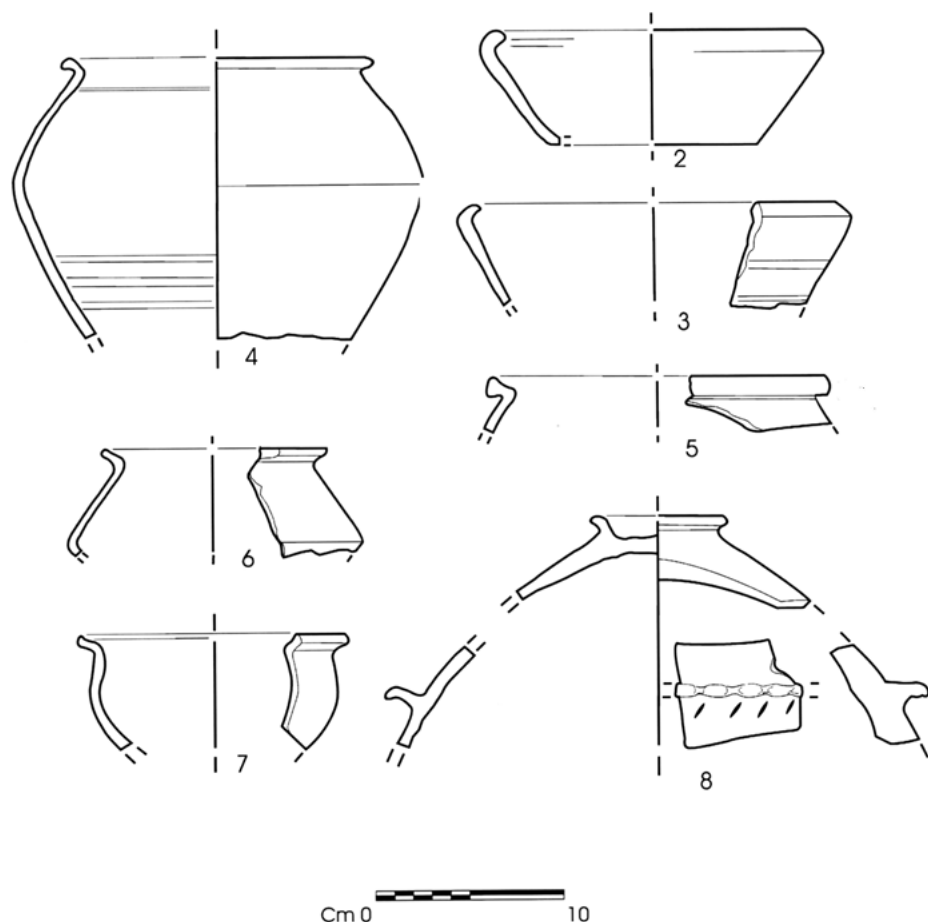


Fig. 24: Coarse ware from Faenza and Rimini (after Negrelli 2007).

interlaced.²⁹ Alpine soapstone pots are well documented particularly in Comacchio and this witnesses the beginnings of a new commercial route along the Po river.

The events of the 7th century had important implications on production, distribution and use of ceramics in the 8th century. From the 7th century open forms become less and less frequent. This fact might probably be connected not only to a change in the type of containers, most of which were probably made of wood, but also to cultural, gastronomic and dietary modifications. In this period, we have a different situation between urban and rural sites. Although the archaeological research is more concentrated in urban sites than in rural ones, surface surveys

²⁹ Negrelli 2015.

produce some diagnostic sherds. The contexts concerning the towns of the Ravenna region, such as Rimini, Imola and Cesena, show us a very complex association of different objects of specialised production. This situation suggests the existence of a production which was made for urban markets. A similar situation is attested in central and southern Italy.³⁰

In the 8th century there is also an important event: the rise of a new town, Comacchio, an *emporium* situated along the Adriatic coast and near the Po river.³¹ Although the economic system of Ravenna is still stable and the patrimony of the church is still huge,³² political fragmentation and privatisation of trade resulted in the reduction of the leading role of Ravenna, and in the growth of new commercial centres. Now a new type of pottery appears, the painted pottery, that has a large circulation in the northern Adriatic area. From the beginning of the 8th century fine table wares start to increase while glazed pottery decreases in association with two types of cooking ware in coarse fabric: ollae and *clibani*, hand and potter's wheel made. Alpine soapstone pots that come from the Central Alps are constantly increasing. Globular amphorae of eastern production are widespread also in inland areas.

The archaeological data that we have just illustrated lead us to summarize the main points of this contribution.

In the 5th century (and until the first half of the 6th century) it is possible to assume a commercial competition between the two different Mediterranean areas (eastern and western ones).

- African Red Slip Ware is widespread in urban sites as in rural areas and it is used both by urban elites and lower classes. The differences are in the quantity and quality of objects – the finds coming from urban sites were more numerous and of more various forms.
- Imports from Africa do not fall with the Vandal invasion. They continue to arrive unchanged until the middle of the 6th century.
- In the 5th century we see African, eastern Mediterranean and Aegean amphorae, but there is no local amphora production. This indicates that, either less wine was produced, or people used different containers, for example barrels, that are not always conserved. An event must have happened that we still do not clearly understand. According to some studies the surplus was not wine but grain; this hypothesis is in contradiction with another that asserts a limited grain production in the territory of Ravenna because in the 7th century Ravenna imported 50,000 *modii* of grain from Sicily. In addition, the area around Cesena in the 4th and in the 5th century exported wine.³³

³⁰ Negrelli 2009.

³¹ Gelichi 2007.

³² Cosentino 2005, 431–433 Cosentino 2012.

³³ Cosentino 2008, 196–197.

- The presence of imported ceramics could be the marker of sites that have a leading administrative and economic position. This situation regards the towns along the Adriatic coast such as Rimini and Ancona, and also inland towns and villages that are market places (*nundinae*) and points of reference for the territory.
- In the period from the end of the 4th to the end of the 6th century there is a great variety in type and quantity of regional production. This could be connected to what happened in rural areas where, after the crisis of the 3rd century, we notice a vitality in local markets (*nundinae*) as seen in the kiln site of Sant’Arcangelo.³⁴
- Local production of fine ware is not a consequence of a lack of imports but an independent and a direct result of a thriving economic system of the 5th century.³⁵

A breaking point occurs at the middle of the 6th century after the Gothic War (535–553 A.D.) with the administrative re-organisation made by Justinian and with the Lombard invasion of Italy (568 A.D.). After this period there was a re-establishment in the relationship with Constantinople.

- There are fewer ceramic types and forms.
- We observe two phenomena: the decrease of African Red Slip Ware imports and the increase of east Mediterranean imports, mainly amphorae. This is evidence of a new system that has two important points of reference: Constantinople and Carthage. This latter, in particular, could have been a centre of sorting of items coming from the eastern Mediterranean.³⁶ This hypothesis is based on the huge numbers of east Mediterranean amphorae in Carthage archaeological contexts dated after the Byzantine reconquest. We also need to consider the presence on wrecks (Poreč, Pola, Krk, Sebenico, Zara and Korcula) dated from the mid-6th to the 7th century of African amphorae with pottery coming from the eastern Mediterranean.
- Trans-regional exchanges are still documented, such as by amphorae Keay 52 from south Italy and Lamps Provoost 10 from Sicily.
- We notice a difference between urban, inland rural and Adriatic coastal sites.
- This difference is clearly illustrated by the Phocian Red Slip Ware evidence, documented in large quantity in Classe. We found large platters that imitated metalware forms used for serving meat and fish during banquets. For this reason they had a status symbol effect.
- Another important modification consists in the appearance of new types of pottery: painted ware, unglazed fine tableware and glazed ware.

³⁴ Negrelli 2007, 323.

³⁵ Fontana 1998, 96–97.

³⁶ Murialdo 2001, 301; Murialdo 2007, 10.

- The type of food and the culinary habits have a direct effect on the form and dimensions of local pottery production which is represented by small bowls and dishes.
- A new material also appears, as the Alpine soapstone that documents connections with the Alpine area of northern Italy.
- The coarse ware demonstrates that there are two types of production: household industry and household workshop.³⁷

During the 7th century a growth in new commercial trade routes can be documented, in which old sites such as Ravenna and Rimini are included as well as newly founded sites such as Comacchio.

- In this century, there are progressively fewer imports.
- We note the end of fine tableware production (glazed, unglazed, painted).
- The appearance of a new type of amphora, the Globular one is attested. In the Roman world, amphorae were produced in the same area where the contents were made; the amphorae were very frequently discarded after transport. In Late Antiquity the trade and the distribution of wine, olive oil and other liquids continues. Therefore, how can the change in shape be explained? According to Zanini there are three relevant factors regarding this: 1) Globular amphorae were much lighter than the traditional ones: they weighed 20–30 kilos instead of 80; 2) Globular amphorae could be used for different purposes and could easily be sold after being emptied; 3) Globular amphorae could be transported by means of small ships, as were the Byzantine ships, and carried overland by animals.
- Between the 7th and the 8th century a renovation in fine tableware local productions occurs; this indicated the connection between the hinterland and Ravenna.
- There is a progressive ruralisation of society, which is more evident in the inland sites.

The weakening of the Byzantine power in the upper Adriatic in the mid-8th century was followed by a transformation of the Ravenna economy, which is paralleled by the rise of a new commercial coastal town, Comacchio.³⁸

- During this period, we have few trustworthy archaeological contexts.
- There is a new amphora type, the Globular amphora, that indicates the relationship with the Aegean islands and the east Mediterranean area.
- The 8th century is the beginning of a long period of transition for the ceramics industry. We notice a final change in materials and shapes. In this century Alpine soapstone pots and coarse ware ollae and *clibani* make up the cooking ware. Tableware consisted of fine and glazed objects.

³⁷ Peacock 1982.

³⁸ Gelichi 2007; Cosentino 2008, 216.

Bibliography

General Studies

- Arthur, Paul. 2007a. "Form, function and technology in pottery production from Late Antiquity to the early Middle Ages". In *Technology in Transition A.D. 300–650*, edited by Luke Lavan, Enrico Zanini and Alexander Sarantis, 159–186. Leiden.
- Arthur, Paul. 2007. "Pots and Boundaries. On cultural and economic areas between Late Antiquity and the Early Middle Ages." In *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*, edited by Michel Bonifay and Jean-Cristophe Tréglia, 15–27. Oxford.
- Arthur, Paul. 2012. "From Italy to the Aegean and back: notes on the archaeology". In *Da un mare all'altro. Luoghi di scambio nell'Alto Medioevo europeo e mediterraneo / From One Sea to Another. Trading Places in the European and Mediterranean Early Middle Ages*, edited by Richard Hodges and Sauro Gelichi, 337–352. Turnhout.
- Balzaretti, Ross. 1996. "Cities, Emporia and Monasteries: Local Economies in the Po Valley, c. AD 700–875." In *Towns in transitions. Urban Evolution in Late Antiquity and the Early Middle Ages*, edited by Simon T. Loseby and Neil Christie, 213–234. London.
- Brogiolo Gian Pietro and Delogu Paolo, eds. 2005. *L'Adriatico dalla tarda antichità all'età carolingia*. Firenze.
- Brogiolo, Gian Pietro. 1996. *Early Medieval Towns in the Western Mediterranean*. Mantova.
- Brown, Peter, Grabar, Oleg and Bowersock Glenn W. 1999. *Late Antiquity. A Guide to the Postclassical World*. Cambridge
- Carandini, Andrea. 1986. "Il mondo della tarda antichità visto attraverso le merci." In *Società romana e Impero tardo-antico*, III. *Le merci, gli insediamenti*, edited by Andrea Giardina, 3–19. Bari.
- Carile, Antonio. 2003. "L'Adriatico in età bizantina: stato degli studi e prospettive di ricerca." In *L'archeologia dell'Adriatico dalla preistoria al Medioevo*, edited by Fiamma Lenzi, 463–478. Firenze.
- Cosentino, Salvatore. 2008. *Storia dell'Italia bizantina (VI–XI secolo). Da Giustiniano ai Normanni*. Bologna.
- De Maria, Lorenza and Turchetti, Rita, ed. 2005. *Rotte e porti del Mediterraneo dopo la caduta dell'impero d'Occidente: continuità e innovazione tecnologiche e funzionali*. Soveria Mannelli.
- Delogu, Paolo. 1994. "La fine del mondo antico e l'inizio del medioevo: nuovi dati per un vecchio problema." In *La storia dell'alto medioevo italiano (VI–X secolo) alla luce dell'archeologia*, edited by Riccardo Francovich and Ghislaine Noyé, 7–29. Firenze.
- Dopo la fine delle ville. Le campagne dal VI al IX secolo*, edited by Gian Pietro Brogiolo, Alexandra Chavarria Arnau and Marco Valenti, Mantova.
- Ellis Simon. 2006. "Middle Class Houses in Late Antiquity." In *Social and Political Life in Late Antiquity*, edited by William Bowden, Adam Gutteridge, and Carlos Machado, 413–437. Leiden.
- Gatto, Ludovico. 2005. "Il mare Adriatico nelle *Variae* di Cassiodoro." In *L'Adriatico dalla tarda antichità all'età carolingia*, edited by Gian Pietro Brogiolo and Paolo Delogu, 271–286. Firenze.
- Gelichi, Sauro. 1996. "Note sulle città bizantine dell'esarcato e della Pentapoli tra IV e IX secolo." In *Early Medieval Towns in the Western Mediterranean*, edited by Gian Pietro Brogiolo, 67–76. Mantova.
- Gelichi, Sauro. 2003. "L' arco nord-orientale dell'Adriatico nel Medioevo: bilancio critico delle risorse archeologiche e prospettive future." In *L'archeologia dell'Adriatico dalla preistoria al Medioevo*, edited by Fiamma Lenzi, 479–498. Firenze.

- Gelichi, Sauro. 2007a. "Gestione e significato sociale della produzione, della circolazione e dei consumi della ceramica nell'Italia dell'alto Medioevo." In *Archeologia e società tra tardo antico e alto Medioevo*, edited by Gian Pietro Brogiolo and Alexandra Chavarria, 47–70. Mantova.
- Gelichi, Sauro. 2007. "Flourishing places in North-Eastern Italy: towns and emporia between late antiquity and Carolingian age." In *Post-Roman Towns, Trade and Settlement in Europe and Byzantium*, 2, *Byzantium, Pliska, and the Balkans*, edited by Joachim Hennings, 77–104. Berlin/New York.
- Gelichi, Sauro, Librenti, Mauro and Negrelli, Claudio. 2005. "La transizione dall'Antichità al Medioevo nel territorio dell'antica Regio VIII." In *Dopo la fine delle ville. Le campagne dal VI al IX secolo*, edited by Gian Pietro Brogiolo, Alexandra Chavarria Arnau and Marco Valenti, 53–80. Mantova.
- Hansen, Inge L. and Wickham, Chris, ed. 2000. *The Long Eighth Century (The Transformation of the Roman World, 11)*. Leiden/Boston/Köln.
- Henning, Joachim, ed. 2004. *Post-Roman Towns and Trade in Europe, Byzantium and the Near East*. Bad Homburg.
- Henning, Joachim. 2007. "Early European towns: the way of the economy in the Frankish area between dynamism and deceleration 500–1000 AD." In *Post-Roman Towns 2007, Trade and Settlement in Europe and Byzantium*, 1. *The heirs of the Roman West*, edited by Joachim Henning, 3–40. Berlin/New York.
- Hodges, Richard and Bowden, William, ed. 1997. *The Sixth Century. Production, Distribution and Demand (The Transformation of the Roman World, 3)*. Leiden/Boston/Köln.
- Lebeq, Stéphane. 1997. "Routes of Change: Production and Distribution in the West (4th–8th Century)." In *The Transformation of the Roman World AD 400–900*, edited by Leslie Webster and Michelle Brown, 67–78. London.
- Lebeq, Stéphane. 1998. "Entre antiquité tardive et très haut Moyen Age: permanence et mutations des systèmes de communications dans la Gaule et ses marges." In *Morfologie sociali e culturali in Europa fra tarda antichità e alto medioevo (Settimane di studio del Centro Italiano di Studi sull'Alto Medioevo, 45)*, 461–501. Spoleto.
- Lenzi, Fiamma, ed. 2003. *L'archeologia dell'Adriatico dalla Preistoria al Medioevo*. Firenze.
- McCormick, Michael. 2001. *The Origins of the European Economy. Communications and Commerce, AD 300–900*. Cambridge 2001.
- Murialdo, Giovanni. 2007. "Alto- Adriatico e alto- Tirreno nel mondo mediterraneo: due mari a confronto tra VI e X secolo." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrelli, 9–29. Mantova.
- Murialdo, Giovanni. 2001. "I rapporti economici con l'area mediterranea e padana." In *S. Antonino: un insediamento fortificato nella Liguria bizantina*, edited by Tiziano Mannoni and Giovanni Murialdo, 301–307. Bordighera.
- Panella, Clementina. 1993. "Merci e scambi nel Mediterraneo tardoantico." In *Storia di Roma. L'età tardoantica. I luoghi e le culture*, edited by Andrea Carandini, Lellia Cracco Ruggini and Andrea Giardina, 613–697. Torino.
- Peacock, David P. 1982. *Pottery in the Roman world: an ethnoarchaeological approach*. London.
- Reynolds Paul. 1995. *Trade in the Western Mediterranean, AD 400–700: The Ceramic Evidence*. Oxford.
- Wickham, Chris. 2000. "Overview: production, distribution and demand, II." In *The Long Eighth Century Production, Distribution and Demand*, edited by Inge L. Hansen and Chris Wickham, 345–377. Leiden.
- Wickham, Chris. 2005. *Framing the Early Middle Ages. Europe and the Mediterranean*. Oxford.

- Zanini, Enrico. 1998. *Le Italie bizantine. Territorio, insediamenti ed economia nella provincia bizantina d'Italia (VI-VIII secolo)*. Bari.
- Zanini, Enrico. 2003. "La ceramica bizantina in Italia tra VI e VIII secolo. Un sistema informativo territoriale per lo studio della distribuzione e del consumo." In *VII^e Congrès International sur la Céramique Médiévale en Méditerranée*, edited by Charalambos Bakirtzis, 381–394. Athens.
- Zanini, Enrico. 2006. "Artisan and Traders in the Early Byzantine City: Exploring the Limits of Archaeological Evidence." In *Social and Political Life in late Antiquity*, edited by William Bowden, Carlos Machado and Adam Gutteridge, 373–411. Leiden/Boston.

Ravenna, Classe and its Surroundings

- Augenti, Andrea, Cirelli, Enrico and Marino, Davide. 2009. "Case e magazzini a Classe tra VII e VIII secolo: nuovi dati dal quartiere portuale (scavi 2002–2005)." In *V Congresso Nazionale di Archeologia Medievale*, edited by Giuliano Volpe and Pasquale Favia, 138–144. Firenze.
- Augenti, Andrea. 2005. "Nuove Indagini archeologiche a Classe." In *Ravenna da capitale imperiale a capitale esarcale*, Atti del XVII Congresso Internazionale di Studi sull'Alto Medioevo, 237–253. Spoleto.
- Augenti, Andrea. 2006. "Ravenna e Classe: archeologia di due città tra la tarda Antichità e l'alto Medioevo." In *Le città italiane tra la tarda Antichità e l'alto Medioevo*, edited by Andrea Augenti, 185–217. Firenze.
- Augenti, Andrea, Cirelli, Enrico, Nannetti, Maria Carla, Sabetta, Tiziana., Savini, Elena and Zantedeschi, Elvira. 2007. "Nuovi dati archeologici dallo scavo di Classe." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrelli, 257–296. Mantova.
- Augenti, Andrea and Bertelli, Carlo, eds 2007. Felix Ravenna. *La croce, la spada, la vela: l'alto Adriatico fra V e VI secolo*. Milano.
- Augenti, Andrea. 2008. "A Tale of Two Cities. Rome and Ravenna between 7th and 9th century AD." In *774. Ipotesi su una transizione*, edited by Stefano Gasparri, 175–198. Turnhout.
- Bermond Montanari, Giovanna, ed. 1983. *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche tra Ravenna e Classe*. Imola.
- Carile, Antonio, ed. 1991. *Storia di Ravenna*, II/l. *Dall'età bizantina all'età ottomana*. Venezia.
- Cavalazzi, Marco and Fabbri, Elisa. 2015. "Ceramiche da cucina di V- VII secolo dallo scavo del porto di Classe (RA)." In *Le forme della crisi Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 21–28. Bologna.
- Cirelli, Enrico. 2007. "Ravenna e il commercio nell'Adriatico in età tardoantica." In Felix Ravenna. *La croce, la spada, la vela: l'alto Adriatico fra V e VI secolo (Catalogo della mostra)*, edited by Andrea Augenti and Carlo Bertelli, 45–50. Milano.
- Cirelli, Enrico. 2009. "Anfore globulari a Classe nell'alto Medioevo." In *V Congresso Nazionale di Archeologia Medievale*, edited by Giuliano Volpe and Pasquale Favia, 563–568. Firenze.
- Cirelli, Enrico. 2015. "Dall'alba al tramonto. Il vasellame di uso comune a Ravenna e nel suo territorio tra la tarda antichità e l'alto medioevo (III- VIII sec.)." In *Le forme della crisi Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 13–19. Bologna.
- Cirelli, Enrico. 2015a. "La ceramica di uso domestico dall'area portuale di Classe (RA) (III- VIII secolo)." In *Le forme della crisi Produzioni ceramiche e commerci nell'Italia centrale tra*

- Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 29–37. Bologna.
- Cirelli, Enrico. 2015b “Material culture in Ravenna and its hinterland between the 8th and 10th century.” In *Three empires, three cities: identity, material culture and legitimacy in Venice, Ravenna and Rome, 750–1000*, edited by Veronica West-Hartling, 101–132. Turnhout.
- Cosentino, Salvatore. 2005. “L’approvvigionamento annonario di Ravenna dal V all’ VIII secolo: l’organizzazione e i riflessi socio-economici”, In *Ravenna da capitale imperiale a capitale esarcale*, I, 405–434. Spoleto.
- Cosentino, Salvatore. 2012. “Ricchezza e investimento della chiesa di Ravenna tra la tarda antichità e l’alto medioevo.” In *Da un mare all’altro. Luoghi di scambio nell’Alto Medioevo europeo e mediterraneo / From One Sea to Another. Trading Places in the European and Mediterranean Early Middle Ages*, edited by Richard Hodges and Sauro Gelichi, 417–440. Turnhout.
- Gelichi, Sauro. 1983. “Ceramica grezza altomedievale.” In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche tra Ravenna e Classe*, edited by Giovanna Bermond Montanari, 127–129. Imola.
- Gelichi Sauro. 1998. “Ceramiche tipo Classe.” In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 481–485. Firenze.
- Gelichi, Sauro. 2000. “Ravenna, ascesa e declino di una capitale.” In *Sedes regiae (ann. 400–800)*, edited by Gisela Ripoll and José M. Gurt, 109–134. Barcellona.
- Guarnieri, Chiara, Montevocchi, Giovanna and Negrelli, Claudio. Forthcoming. *Ravenna, una città in declino? Contesti altomedievali di ambito urbano in Adriatico altomedievale (VI-X secolo): scambi, porti, produzioni*.
- Gelichi, Sauro and Maioli, Maria Grazia. 1992. “La ceramica invetriata tardo-antica e altomedievale dall’EmiliaRomagna.” In *La ceramica invetriata tardoantica e altomedievale in Italia*, edited by Lidia Paroli, 215–278. Firenze.
- Maioli, Maria Grazia and Stoppioni, Maria Luisa. 1987. *Classe e Ravenna fra terra e mare*. Ravenna.
- Maioli, Maria Grazia. 1991. “Strutture economico-commerciali e impianti produttivi nella Ravenna bizantina.” In *Storia di Ravenna, II/l. Dall’età bizantina all’età ottomana*, edited by Antonio Carile, 223–247. Venezia.
- Piazzini, Giacomo. 2015. “Ravenna e il levante. I ritrovamenti di Agorà M334 a Classe (RA).” In *Le forme della crisi. Produzioni ceramiche e commerci nell’Italia centrale tra Romani e Longobardi*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 39–43. Bologna.
- Stoppioni, Maria Luisa. 1983. “Le anfore.” In *Ravenna e il porto di Classe. Venti anni di ricerche archeologiche tra Ravenna e Classe*, edited by Giovanna Bermond Montanari, 130–146. Imola.

Romagna and Other Territories

- Andrea Augenti, De Brasi, Giulia, Ficara, Marilisa and Mancassola, Nicola. 2005. “L’Italia senza corti? L’insediamento rurale in Romagna tra VI e IX secolo.” In *Dopo la fine delle ville. Le campagne dal VI al IX secolo*, edited by Gian Pietro Brogiolo, Alexandra. Chavarria Arnau and Marco Valenti, 17–52. Mantova.
- Berti, Fede, Bollini, Maria, Gelichi, Sauro and Ortalli, Jacopo, eds. 2007. *Genti nel Delta, da Spina a Comacchio. Uomini, territorio e culto dall’Antichità all’Alto Medioevo*. Ferrara.
- Brogiolo, Gian Pietro and Olcese, Gloria, eds. 2000. *Produzione ceramica in area padana tra il II secolo a.C. e il VII secolo d. C.: nuovi dati e prospettive di ricerca*. Mantova.

- Burgio, Rita., Campagnari, Sara and Giordani, Nicoletta. 2004. "Le ceramiche a rivestimento rosso in Emilia centro-occidentale tra tarda antichità e altomedioevo: classificazione e problemi cronologici." In *Produzione e circolazione dei materiali ceramici in Italia settentrionale tra VI e X secolo*, edited by Gabriella Pantò, 129–152. Mantova.
- Cavalazzi, Marco and Ficara, Marilisa. 2015. "Importazioni e cultura materiale in età tardoantica nell'Ager Decimanus." In *Le forme della crisi Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 53–61. Bologna.
- Corti, Carlo. 2007. "Importazioni e circolazione lungo il corso del Po tra IV/V e VII/VIII secolo." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrèlli, 237–256. Mantova.
- Curina, Renata, Farello, Patrizia, Gelichi, Sauro, Novara, Paola and Stoppioni Maria Luisa. 1990. "Contesti tardoantichi e altomedievale dal sito di Villa Clelia (Imola, Bologna)." *Archeologia Medievale*, XVII: 121–234.
- Curina, Renata and Negrèlli, Claudio. 1998. "Le ceramiche tardoantiche a rivestimento rosso: i pozzi di Orto Granara e di Bubano." *Archeologia dell'Emilia Romagna* II, 1: 201–230.
- Gelichi, Sauro. 1994. "Pozzi deposito e tesaurizzazioni nell'antica regio VIII Aemilia." In *Il tesoro nel pozzo. Pozzi deposito e tesaurizzazioni nell'antica Emilia*, edited by Sauro Gelichi and Nicoletta Giordani, 13–72. Modena.
- Gelichi, Sauro, ed. 2009. *L'isola del vescovo. Gli scavi archeologici intorno alla Cattedrale di Comacchio*. Firenze.
- Guarnieri, Chiara, Montevecchi, G.iiovanna and Negrèlli, Claudio. 2004. "Ceramiche tardoantiche a Faenza: la sequenza dallo scavo di Palazzo Grecchi." In *Produzione e circolazione dei materiali ceramici in Italia settentrionale tra VI e X secolo*, edited by Gabriella Pantò, 193–216. Mantova.
- Guarnieri, Chiara., Montevecchi, Giovanna, Negrèlli, Claudio. 2007. "Contesti di età tardoantica da recenti scavi urbani faentini. Presenza e distribuzione della ceramica da cucina e da trasporto" In *LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archeometry*, edited by Michel Bonifay and Jean-Cristophe Trégli, 525–535. Oxford.
- Guarnieri, Chiara., Montevecchi, Giovanna, Negrèlli, Claudio Fabbri, Bruno and Gualtieri, Sabrina. Forthcoming. *Complessi di scavo di età tardoantica provenienti da contesti abitativi urbani ed extraurbani della Romagna in Economia e territorio nell'Adriatico centrale tra tarda Antichità e alto Medioevo (IV-VIII secolo)*.
- Maioli, Maria Grazia. 1993. "Le lucerne". In *Con la terra e con il fuoco. Fornaci romane del riminese*, edited by Maria Luisa Stoppioni, 161–170. Rimini.
- Malaguti, Chiara and Zane, Antonella. 1999. "La pietra ollare nell'Italia nordorientale". *Archeologia Medievale* XXVI: 463–479.
- Malaguti, Chiara, Riavez, Pietro, Asolati, Michele, Bressani, Martin and Massa, Serena. 2007, "Grado. Cultura materiale e rotte commerciali nell'Adriatico tra tardoantico e altomedioevo." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrèlli, 65–90. Mantova.
- Mazzeo Saracino, Luisa. 2004. "Circolazione dei manufatti e dati cronologici dallo studio dei materiali." In *Nuove ricerche e scavi nell'area della villa di Teodorico a Galeata*, edited by Sandro De Maria, 135–156. Bologna.
- McCormick, Michael. 2007. "Where do trading towns come from? Early medieval Venice and the northern emporia." In *Post-Roman Towns 2007, Trade and Settlement in Europe and Byzantium*, I. *The heirs of the Roman West*, edited by Joachim Henning., 41–68. Berlin/New York.

- Montevecchi, Giovanna and Negrelli, Claudio. 1998, "La sequenza dei materiali di età romana-tardoantica-altomedievale." In *La domus di Palazzo Pasolini a Faenza*, edited by Chiara Guarnieri, 123–214. Faenza.
- Negrelli, Claudio. 2002. "Ceramiche tardoantiche da alcuni contesti stratigrafici dell'Emilia orientale." In *Incontro di Studio sulle ceramiche tardoantiche ed altomedievali*, edited by Renata Curina and Claudio Negrelli, 25–54. Mantova.
- Negrelli, Claudio. 2004. "I materiali tardoantichi dai pozzi dell'insediamento rustico in località Orto Granara (Castel S. Pietro, BO)." In *Produzione e circolazione dei materiali ceramici in Italia settentrionale tra VI e X secolo*, edited by Gabriella Pantò, 175–192. Mantova.
- Negrelli, Claudio. 2007. "Vasellame e contenitori da trasporto tra tarda antichità ed altomedioevo: l'Emilia Romagna e l'area medioadriatica." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrelli, 297–330. Mantova.
- Negrelli, Claudio. 2007a, "Produzione, circolazione e consumo tra VI e IX secolo: dal territorio del Padovetere a Comacchio." In *Genti nel Delta, da Spina a Comacchio. Uomini, territorio e culto dall'Antichità all'Alto Medioevo*, edited by Fede Berti, Maria Bollini, Sauro Gelichi, and Jacopo Ortalli, 437–472. Ferrara.
- Negrelli, Claudio. 2008. *Rimini capitale. Strutture insediative, sociali ed economiche tra V e VIII secolo*. Firenze.
- Negrelli, Claudio. 2009. "(In)visibilità dell'alto medioevo: vasellame e strutture insediative nella parte orientale dell'Emilia Romagna." In *V Congresso Nazionale di Archeologia Medievale*, edited by Giuliano Volpe and Pasquale Favia, 557–562. Firenze.
- Negrelli, Claudio. 2012. "Towards a definition of early medieval pottery: amphorae and other vessels in the northern Adriatic between the 7th and the 8th centuries." In *Da un mare all'altro. Luoghi di scambio nell'Alto Medioevo europeo e mediterraneo / From One Sea to Another. Trading Places in the European and Mediterranean Early Middle Ages*, edited by Richard Hodges and Sauro Gelichi, 393–416. Turnhout.
- Negrelli, Claudio. 2015. "Dal VI all'VIII secolo: continuità e rotture nella circolazione dei manufatti ceramici tra Romagna e Delta padano." In *Le forme della crisi Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 139–149. Bologna.
- Panella, Clementina and Saguì, Lucia. 2001. "Consumo e produzione a Roma tra tardoantico e altomedioevo: le merci, i contesti." In *Roma nell'alto medioevo* (Settimane di studio del Centro Italiano di Studi sull'Alto Medioevo, 48), 757–820. Spoleto.
- Pieri, Dominique. 2005. *Le commerce du vin oriental à l'époque byzantine (V^e-VII^e siècles). Le témoignage des amphores en Gaule*. Beyrouth.
- Saguì, Lucia. 2002. "Roma, i centri privilegiati e la lunga durata della tarda antichità. Dati archeologici dal deposito di VII secolo nell'edera della Crypta Balbi." *Archeologia Medievale*, 29: 7–42.
- Stoppioni, Maria Luisa. 1996. "I materiali dello scavo." In *S. Martino prope litus maris. Storia e archeologia di una chiesa scomparsa del territorio cervese*, 65–89. Firenze.
- Stoppioni, Maria Luisa. 2015. "Romagna sud-orientale e appenninica: imitazioni fittili di ceramiche da mensa e di stoviglie metalliche da portata nella Tarda Antichità." In *Le forme della crisi. Produzioni ceramiche e commerci nell'Italia centrale tra Romani e Longobardi (III-VIII sec. d.C.)*, edited by Enrico Cirelli, Francesca Diosono, Helen Patterson, 63–74. Bologna.

Productions

- Anselmino, Lucilla. 1986. "Le lucerne tardoantiche: produzione e cronologia." In *Società romana e Impero tardo-antico*, III. *Le merci, gli insediamenti*, edited by Andrea Giardina, 227–240. Bari.
- Arthur, Paul. 1989. "Aspects of Byzantine Economy: An Evaluation of Amphora Evidence from Italy." In *Recherches sur la céramique Byzantine*, edited by Vincent Déroche and Jean-Michel Spieser, 70–93. Athens.
- Arthur Paul. 1990. "Anfore dall'Alto Adriatico e il problema del Samos Cistern Type." *Aquileia Nostra*, LX1: 282–295.
- Arthur, Paul. 1998. "African Amphorae." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 141–184. Firenze.
- Arthur Paul. 1998a. "Eastern Mediterranean Amphorae between 500 and 700: A View from Italy." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 157–184. Firenze.
- Arthur, Paul and Patterson, Helen. 1994. "Ceramics and early Medieval central and Southern Italy: A potted History." In *La storia dell'alto Medioevo alla luce dell'archeologia*, edited by Riccardo Francovich and Ghislaine Noyé, 409–442. Firenze.
- Auriemma, Rita and Quiri, Elena. 2007. "La circolazione delle anfore in Adriatico tra V e VIII secolo d.C." In *La circolazione delle ceramiche nell'Adriatico tra tarda antichità e altomedioevo*, edited by Sauro Gelichi and Claudio Negrelli, 31–64. Mantova.
- Barbera, Mariarosaria and Petriaggi, Roberto. 1993. *Le lucerne tardo-antiche di produzione africana*. Roma.
- Bonifay, Michel. 2004. *Études sur la céramique tardive d'Afrique*. Oxford.
- Bonifay, Michel. 2005. "Observations sur la typologie des amphores africaines de l'Antiquité tardive." In *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*, edited by Josep Maria Gurt, Jaume Buxeda i Garrigós and Miguel Cau Ontiveros, 451–472. Oxford.
- Brogiolo, Gian Pietro and Gelichi, Sauro. 1986. "La ceramica grezza medievale nella pianura padana", in *La ceramica medievale nel Mediterraneo Occidentale*, (Atti del III Congresso Internazionale, Siena- Faenza 1984), 193–316. Firenze.
- Brogiolo, Gian Pietro and Gelichi, Sauro. 1997. "Ceramiche, tecnologia ed organizzazione della produzione nell'Italia settentrionale tra VI e X secolo." In *Céramique Médievale en Méditerranée*, edited by Gabrielle Démians D'Archimbaud, 139–145. Aix-en-Provence.
- Brogiolo, Gian Pietro and Gelichi, Sauro, eds. 1996. *Le ceramiche altomedievali (fine VI-X secolo) in Italia Settentrionale: produzione e commerci*. Mantova.
- Brogiolo, Gian Pietro and Gelichi, Sauro, eds. 1998. "La ceramica comune in Italia settentrionale tra IV e VII secolo." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 209–226. Firenze.
- Fontana Sergio. 1998. "Le 'imitazioni' della sigillata africana e le ceramiche da mensa tardo-antiche." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 83–100. Firenze.
- Gelichi, Sauro and Negrelli Claudio. 2008. "Anfore e commerci nell'alto Adriatico tra VIII e IX secolo." *Mélanges de l'École Française de Rome. Moyen Âge*, 120/2: 307–326.
- Hayes, John W. 1972. *Late Roman Pottery*. London.
- Hayes, John W. 1980. *Ancient Lamps in the Royal Ontario Museum*. Toronto.
- Hayes, John W. 1998. "The study of Roman pottery in the Mediterranean: 23 years after Late Roman Pottery." *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 9–22. Firenze.

- Keay, Simon J. 1984. *Late Roman Amphorae in the Western Mediterranean, A Typology and Economic study: The Catalan Evidence*. Oxford.
- Keay, Simon J. 1998. "African amphorae." *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 141–155. Firenze.
- Mackensen, Michael. 1993. *Die Spätantiken sigillata-und Lampentöpfereien von El Mahrine (Nordtunisien). Studien zur Nordafrikanischer Feinkeramik des 4. bis 7. Jahrhunderts*. München.
- Mackensen, Michael 1998. "Centres of African red slip ware production in Tunisia from the late 5th to the 7th century." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 23–39. Firenze.
- Malaguti, Chiara. 2002. "Pietra ollare da Carvico San Tomè." In *Incontro di Studio Cer.Am.Is. sulle ceramiche tardoantiche e altomedievale*, edited by Renata Curina and Claudio Negrelli, 137–144. Mantova.
- Martin Archer. 1998. "La sigillata focese (Phocean Red- Slip/Late Roman C Ware)." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 109–122. Firenze.
- Massa, Serena. 2000. "Le imitazioni di ceramiche mediterranee tra IV e VII secolo in area padana e le ultime produzioni fini da mensa: problemi di metodo e stato della ricerca." In *Produzione ceramica in area padana tra il II secolo a.C. e il VII secolo d. C.: nuovi dati e prospettive di ricerca*, edited by Gian Pietro Brogiolo and Gloria Olcese, 119–128. Mantova.
- Pacetti, Francesco. 1998. "La questione delle Keay LII nell'ambito della produzione anforica in Italia." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 185–208. Firenze.
- Reynolds, Paul. 2005. "Levantine Amphorae from Cilicia to Gaza: A Typology and Analysis of Regional Production Trends from the 1st to the 7th Centuries." In *LRCW 1. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry*, edited by Josep Maria Gurt, Jaume Buxeda i Garrigós and Miguel Cau Ontiveros, 563–611. Oxford.
- Tortorella, Stefano. 1998. "La sigillata africana in Italia nel VI e nel VII secolo d.C.: problemi di cronologia e distribuzione." In *Ceramica in Italia: VI- VII secolo*, Atti del Convegno in onore di John W. Hayes, edited by Lucia Saguì, 41–69. Firenze.
- Vannini, Guido and Molducci, Chiara. 2005. "Il complesso di Vecchiazzano. Un pozzo-deposito fra Longobardi e Bizantini." In *L'Italia alto-medievale tra archeologia e storia: studi in ricordo di Ottone d'Assia*, edited by Sauro Gelichi. Padova.

Vivien Prigent

10 Notes on the Production and Circulation of the Byzantine Ravennate Coinage

Abstract: The paper aims at offering a presentation of the evolution of the Ravennate coinage. First a brief overview of the gold denominations struck by the mint is provided along with some explanation of the changing pattern of production. The initial domination of the *tremissis* is linked to economic relations with the Frankish world. New types of Ravennate *semisses* and *tremisses* for the reign of Heraclius are introduced to complement the standard catalogues, leading to modifications in the chronology of the various emissions. During the reign of Constans II, several marks of mysterious meaning were introduced on the coinage, a fact tentatively explained by the involvement of private goldsmiths and craftsmen in the coin production. A new attribution of the famous earrings of Senise to a Ravennate workshop lends support to the hypothesis. The article then addresses the problem of the drastic weight reduction of the silver coinage during the 6th and 7th centuries. The problem is tackled from the point of view of the relative value of gold, silver and bronze and exchange rates with the metropolitan coinage. This approach leads to propose the following system at the end of the 6th century: one solidus for 864 *folleis*, 6 *folleis* for a silver coin of 240 *nummi*, 24 pounds of bronze for one *solidus*. Furthermore, the weight reduction of the silver is explained as a side effect of the debasement of the bronze coinage. Finally, the metrology of the bronze coinage is analysed in relation to its Ostrogothic predecessor, leading towards the reattribution to a North Adriatic mint of a light-weight Justinian *follis* hitherto catalogued under the mint of Catania and to a reassessment of the importance of the half *follis* in connexion with the metrology of the Constantinopolitan coinage.

As we all know, one of the key characteristics of the Byzantine Empire during the high Middle Ages was the strength of its monetary economy.¹ What is at stake with the coinage is not merely economy, but the basic form of the state through its relations with its aristocracy. Maybe nowhere like in Italy, this dimension is so clear, because in the peninsula, the crisis of imperial authority went hand in hand with the crisis of Byzantine coinage. In this perspective, studying closely the production and circulation of the coinage of the capital city of Byzantine Italy stands out as a necessity.²

¹ Classic demonstration in the monumental work of Hendy 1969.

² I tried to offer a panorama, clearly schematic, of the main evolutions in two contributions for the same volume Prigent, forthcoming. Although he provides good material, the recent Ranieri 2006, must be used with caution.

Nonetheless, browsing through the bibliography quickly reveals that a real synthesis on this topic is currently out of hand, because the ground work remains largely to be done.³ Contrary to the impression one can get by perusing the major catalogues of Byzantine coinage,⁴ even the identification of Ravennate coins is still largely a matter of debate. Such and such type of bronze coin identified as Ravennate by one numismatist is considered a Salonitan⁵ or Sicilian production by his colleague;⁶ small 6th-century silver denominations are contested between Rome and Ravenna,⁷ while their descendants from the next century found along the upper Tyrrhenian coast are attributed to Ravenna or considered the production of some local secondary mint.⁸ Furthermore, patiently sieving through scanty references in old or not so old publications does not always allow us to distinguish between real Ravennate coins and Lombard imitations.⁹

The impact of these problems goes far beyond mere numismatic bickering and taxonomy, as it blurs the image we can build of the circulation and metrology of the Ravennate coinage and of the evolution of its general availability for economic or political purposes. So in all that follows, the reader is advised to keep in mind that many things remain hypothetical.

The Evolution of the Production: Monetary Types and Metrology

Byzantine Ravenna inherited from the Ostrogothic kings two mints: first, the *moneta auri* whose location is given by the papyrus of 572 as *in porticum sacri cubiculi*, probably near the church of San Giovanni Evangelista and the *Platea Maior*; then, a

3 The more important contributions are those of Ermanno Arslan. Amongst his numerous articles, especially important is Arslan 2005a, 191–236. Two recent synthesis appeared, one in French, Morrisson/Callegher 2015, 255–278, the other in English, Prigent 2016, 151–161.

4 In what follows I will mainly use Hahn/Metlich 2000 (henceforth *MIBE*) and Hahn/Metlich 2009 (henceforth *MIBEC*), because it offers reference to the other main catalogues like Morrisson 1970; Bellinger 1966 and Grierson 1968.

5 I will come back later on this problem.

6 Callegher 2004, 101–117. On the contrary, I pleaded for the attribution to Sicily of *MIBE*, 229a (Prigent 2013, 144) given to Rome by Wolfgang Hahn (*MIBE*, see this number in the folding tables).

7 Arslan 2005a, 217, seems to attribute the CN, PK and PKE marked coins of Justinian to Ravenna rather than Rome, like *MIBE*, 55–72.

8 This problem is centred on the material excavated in the Byzantine *castrum* of Sant'Antonino di Pertì. Small silver coins found locally have been ascribed to a local mint by Ermanno Arslan, while Bruno Callegher prefers to identify them with regular Ravennate production. Arslan 2001, 242–243; Callegher 2002, 266. See also Arslan 2005b, n. 108–111.

9 For an overview of these, Grierson/Blackburn 1986 (henceforth *MEC*).

moneta publica, to be identified with the *moneta vetus* mentioned by Agnellus of Ravenna for the end of the 7th century and located by the postern gate of Ovilio.¹⁰ These two mints normally worked respectively high value metal (gold and silver) and bronze, but striking similarities in the style of silver and bronze coins lead to hypothesize a more centralized production of the dies used in both mints or at least the employment of a common group of expert die-sinkers.

The production of gold coins was the most continuous, from the very year of the Justinianic Reconquista to the fall of the city to the Lombard king, with only short interruptions. The Byzantine gold coinage stepped into the shoes of its Gothic predecessor without noticeable change, even if the exact chronology is not crystal clear. Before Justin II's decision to split the production between Rome and Ravenna, the mint, or more precisely its staff, moved back and forth, making it difficult to differentiate Roman and Ravennate coinage.¹¹ The problem got even trickier when the Sicilian mint opened in the early 550s, because its craftsmen also came from the same pool of technical specialists.¹²

Initially, the mint struck mainly *solidi*, with some rare fractions, but this policy changed under Justin II, when the *tremissis* became the main production.¹³ It is also possible that the mint's production became more regular, if we extrapolate for Italy the policy enacted in Africa.¹⁴ The rationale for this resolute switch towards the *tremissis* is far from evident, especially as the silver currency offered alternative for medium scale payments. It is sometimes linked to the supposed necessity to adapt to the Lombard monetary system, but even if some Justinian and Justin II's *tremisses* were imitated,¹⁵ the Lombard coinage really took off later, with Maurice's *tremissis* as prototype.¹⁶ The choice of Maurice's coins as a model stems from their relative abundance and cannot be used as a precise dating point. Actually the "Pseudo-Maurice" coinage seems to have been contemporary to another type inspired by Heraclius, the first one issued in Pavia, or at least in the Northern Kingdom, the second in the Tuscan duchies¹⁷ and probably also in Benevento,¹⁸ which lead us toward a late date

¹⁰ Morrisson 2001, 49–58 and Augenti 2005, 7–33.

¹¹ *MIBE*, 49. The mints of Rome and Ravenna worked alternately during the Gothic wars, with issues of limited volumes, as the existing coinage was sufficient. Furthermore, after the end of the war the *Pragmatic Sanction* gave legal tender to all coins already in circulation.

¹² As exemplified by the very similar styles of the coins found in the Monte Iudica hoard, Fairhead/Hahn 1988, 29–39.

¹³ *MIBEC*, 25. In the Aldrans hoard, only 7 *solidi* for 79 *tremisses*, Hahn/Luegmeyer 1992.

¹⁴ Morrisson 1988a, 41–64.

¹⁵ Aldrans hoard 41, 44–46, Hahn/Luegmeyer 1992. *MEC*, n. 294 and 298.

¹⁶ Certainly earlier types can still appear, but in order for the Byzantines to adapt themselves to Lombard coinage this last one should already have been conspicuous so isolated early coins would not change this basic fact.

¹⁷ *MEC*, I, 59.

¹⁸ Arslan 1999, 243.

for this imitative coinage. So the necessity to adapt worked initially the other way around,¹⁹ even if in the 7th century the decision to stick to *tremisses* as the main coinage could have been reinforced by the new Lombard coinage.²⁰ Maybe, the volume of Late Roman and Ostrogothic *solidi* circulating in Italy with the official blessing of the *pragmatica sanctio* was abundant enough for the Imperial mint to concentrate on the fractions,²¹ but the hypothesis could seem a little far-stretched.

One other possible explanation would put forward the economic ties between Northern Italy and the Frankish world. The circulation of fifth- and sixth-century Ravennate silver coins is well-attested beyond the Alps²² and initial metrological specificities of this coinage seem to be linked with this orientation.²³ The Aldrans hoard, buried in the 580s, also testifies to the circulation of Byzantine Ravennate coinage through the Alpine pass.²⁴ Ravennate coins are not found amongst the stray finds in Gaul but gold coinage is rarely lost and it is difficult to build an argument on this absence.²⁵ So one wonders if the priority given to the *tremissis* does not stem from the fact that in the neighbouring Frankish world the *solidus* was much rarer than the *tremissis*: 1 to 8 for example in the Alesia hoard.²⁶ In the 580s the Franks, like the Visigoths before them,²⁷ even abandoned the production of *solidi*, focusing on the *tremissis*.²⁸ The reason of this trend of Frankish coin production towards the *tremissis* is also obscure but in absence of regular silver coinage,²⁹ a denomination smaller than the *solidus* could have been more manageable. One should also keep in mind that the Provencal moneyers from the end of the 6th century took the pain to specify on the coins they struck their value in Roman carats,

¹⁹ The Frankish switch to *tremissis* occurred also under Maurice, *MEC*, 90.

²⁰ The same preference for *tremisses* can be observed for the Sicilian mint's early production, and there, no Lombard connection can be accepted. Nonetheless, the Sicilian production was very small at the time and followed the pattern of the Italian mainland, so it cannot really contribute to solve the problem.

²¹ For example, *solidi* were the main production in Africa were no gold coins from the previous period, the Vandal rule, were in circulation, Morrisson 2003, 65–85. The owner of the Latran hoard had also put together coins from Arcadius, Honorius, Theodosius II, Valentinian III, Marcian, Leo I, Justin I, Justinian I, Tiberius II, Phocas and Heraclius, Kent 1994, X, p. cix.

²² Arslan 2005a, 215 and 219; Callegher 2002, 252; Werner 1935, 110, 135. In the 5th century, gold had also been current enough for the first Visigothic coinage to be called “pseudo-Ravennate”.

²³ For the Ostrogothic coinage, Metlich 2004, 37, 39. *MIBEC*, 27, stresses the reduction of the silver *siliqua* weight along the metrology used in the East.

²⁴ Hahn/Luegmeyer 1992.

²⁵ Metcalf 2006, 337–393.

²⁶ *MEC*, 113–114.

²⁷ On their use, see the interesting Metcalf 1988, 15–34.

²⁸ On the preponderance of the *tremissis*, especially in the North, see also McCormick 2013, 353.

²⁹ Although old silver coins still circulated and even some *argentei minime* can have been struck, but this coinage is quite obscure, on the silver circulation at the time see the insightful McCormick 2013, esp. 354–355.

even if they had switched to a grain-based Germanic metrology.³⁰ So, even if these *solidi gallicani* were not happily accepted in Italy, at least by the Pope, it was certainly not the case the other way around.³¹ As a matter of fact, Jean Lafaurie and Cécile Morrisson stressed that Byzantine gold disappears from Gaul precisely when mints in Provence not only adopt the newest Imperial design of the Cross on steps but also increase their activity, hinting at a recycling of Byzantine gold³² in what was apparently one of the most active mint in the Merovingian world.³³ Recent analysis also revealed an increase of platinum trace elements in the Marseille coinage from the first half of the 7th centuries which could be explained by the increased use of Byzantine gold with high-platinum content, like the Ravennate coinage.³⁴

The importance of the *tremissis* production explains the variety of types and new ones remain certainly to be found. I would illustrate this by a few examples coming from the important hoard of Racamulto. Found in the 1930s in the province of Agrigento (Southern Sicily), it is composed of 204 coins amongst which around 8% of Ravennate coins, supplemented by various not Lombard imitations, a quite high proportion. I will propose elsewhere a proper edition and analysis of this important hoard and of the evidence it offers for 7th century monetary circulation in the West. For the moment, I will just offer here a description of the new types of Ravennate coins for the reign of Heraclius discovered in the hoard.

The first one (Fig. 1a), a *semissis* leads us to question the current classifications of Heraclius' Ravennate coinage in the *MIB* (= Hahn 1981). The main criteria for ordering the coins is the obverse legend with four models 1) DNHERACL+IVSPPAVC; 2) DNHERACLI+PERPAVC; C) DNHERACLIVSPPAVC; D) DNHERACLIPERPPAVC

To the type 2 belongs a coin offering a legend ending in CCT which appears also on *solidi* of the period 613–629. This point led Hahn to accept an indictional reading of the T and a 629–630 date (third indiction). In return this dating entails to put the “cross legends” (types 1 and 2) in the earlier part of the reign and the “cross-less legends” (2–3) in the later part. This was confirmed by the type *MIB* 123 which associates the type 4 obverse legend with a reverse legend ending in CCIF to be read once more as an indiction, 13, and so 639–640. *MIB*, 122, sharing the type 4 legend with this 639–640 coin would also be dated to the very end of the reign. Consequently, the type 3 legend would occupy a space between 629–630 and the end of the reign. Wolfgang Hahn opted for a post 636 date, although I confess I fail to completely understand his reason. This classification seems coherent with an

³⁰ *MEC*, 129.

³¹ Grierson 1959, 95–111.

³² Metcalf 2006, 338; Lafaurie/Morrisson 1987, 46.

³³ Metcalf 2006, 389, third rank in the table. Numbering the specimens is obviously a rough approach but for the moment we cannot do better.

³⁴ Blet-Lemarquand/Bompaire/Morrisson 2010, 175–198.



(a)



(b)



(c)



(d)

Fig. 1: New Ravennate coin types and variants for the reign of Heraclius from the Racalmuto hoard (All numbers from the edition of the hoard t.b.p. by the author; (c) Museo Archeologico Regionale di Agrigento). 1a: *semissis* Racalmuto 164, 1b: *tremissis* Racalmuto 173, 1c: *tremissis* Racalmuto 174, *MIB*, 125, variant c, 1d: *tremissis* Racalmuto 175.

evolution of the reverse design: the cross on globus, the mark of value of the *semis*, adopted three forms A) a plain globus; B) a crown of wreath with an empty centre; C) a crown of wreath around a small pearl/globus. Type A is associated with legend 1 legend (*MIB*, 117); Type B with legend 2 (*MIB*, 118–119); type C with legends 2 (*MIB*, 120), 3 (*MIB*, 121) and 4 (*MIB*, 122–123).

Now, the coin present in the Racalmuto hoard uses an obverse legend DNHERACLI+PERPPAVC, that is a mix of types 2 and 4. On the reverse, the legend ends in VICTORIAAVCCT³⁵ and it makes use of the type C cross. So this coin is obviously an intermediary step between 120 and 122/123. This should lead us to switch the *MIB*, 121 and 122–123 in order to create a coherent evolution. This would date *MIB*, 121 to the very last years of Heraclius, solution all the more convincing that the legends of *MIB*, 121 (obverse PPAV³⁶ and reverse AVCVSTORUN) can be read on the first emission of fraction the following reign (Constans II, *MIB* 134, *tremissis* [no *semis* issued]).

This seems the safest conclusion if we stick to the indictional reading of the end of the reverse legend. But should we stick to it? Actually, the Racalmuto coin shed doubt on the very linchpin of the dating system because it offers the same reverse ending and if we stick to the indictional reading we have two different types issued this very same year. It is not absolutely impossible that the design was changed during the third indiction, but nonetheless this fact is a little embarrassing. Conversely, discarding the indictional dating would also allow us to use our coin to partly fill the long gap in the production of *semisses* postulated by Hahn's classification, with nothing between 629 and 636, even if the production of *solidi* was continued. Nonetheless, the CCT legend coins should not be separated too steeply from the type 2 legend coins because a die links exist between specimens of types *MIB*, 118, 119 and 120 (this last one with CCT legend).³⁷ But because *MIB*, 121 has to be postponed, we can also use *MIB*, 122 to fill the gap. Maybe the clearer lesson here is how fragile our classifications are!

Furthermore, the Racalmuto hoard offers three new *tremissis* types to complete the *MIB* classification. The first one (Fig. 1b) adopts the general composition of the *MIB* 124 et 125, but makes use of the obverse legend of the *semis* *MIB* 117, adding a pearl/dot at the caesura (DNHERACL· IVSPPAVC), like *MIB* 125b for the type 1 legend. The caesura HERACL identifies it as an intermediary step between 124 and 125b, hence an “ideal” datation in 611–612. A second Racalmuto *tremissis* (Fig. 1c) offers a variant of type 125 (c) with nothing at the caesura. The design of the diadema is inspired by the coins of Maurice (*MIB* 50). Since we have now three types for the beginning of the reign, these variants should not be interpreted as successive issue. Then, the hoard

³⁵ The die seems different than the one illustrated in Hahn 1981 (henceforth *MIB*), from Ricotti Prina 1972, pl. 28, n. 14.

³⁶ The last letter fell, the available space being smaller.

³⁷ Check *MIB*, table 8.

offers the *tremissis* linked to the *MIB* 121 *semissis* (Fig. 1d). If the switch proposed earlier for *MIB* 121 and 122–123 is to be accepted, this new coin dates of the very last year of the reign.

To sum up, the evolution of the Ravennate *tremissis* under Heraclius was the following:³⁸

124: DNHERACL + IPERPAVC
 V/125: DNHERACL + IVSPPAVC RACALMUTO 173
 125a: DNHERAC + LIVSPPAVC
 125b: DNHERAC + LIVSPPAVC
 125c: DNHERAI / LIVSPPAVC RACALMUTO 174
 126: DNHERACLI + PERPAVC
 127: DNHERACLI / PERPAVC
 NI27: DNHERACLI / VSPPAVC RACALMUTO 175

As far as the ulterior production is concerned, two important evolutions can be dated to the reign of Constans II. First of all, the peculiar style of Ravennate coinage tends to fade out.³⁹ Simultaneously, we can observe, along with the blooming of imitations, the multiplication on the reverse of letters and dots of mysterious meaning.⁴⁰ This last evolution is quite interesting because it happened at the very same time on the Sicilian coinage, even if on a bigger scale, but its signification remains obscure.⁴¹ I wonder if both evolutions (end of the earlier specific style and appearance of a specific marking system) are not to be seen as a piece of evidence for the intervention of private goldsmiths in the manufacture of coins, not only as engraver but also as gold refiner, the markings allowing to check the provenance of the alloy in case low quality gold was detected in a coin. An unexpected clue supporting this theory could come from a famous Byzantine jewel, the earrings of Senise conserved in the Museum of Naples.

Isabella Baldini links this cloisonné jewel with a South Italian workshop on the account of the style of the precious artefact,⁴² which should lead us toward Sicily an island well-know for its production of luxury items and prosperity. However, the jeweller stamped the reverse of one of the *cloisonné* earrings with the reverse die of a *solidus*.⁴³ It bears the image of two emperors to be identified with the younger

³⁸ In the legend, the cross is given by the ornament of the diadema. I choose numbers matching the *MIB* classification for the sake of clarity.

³⁹ Even a numismatist as talented as Philip Grierson, renounced to offer definitive attributions for most of Italian coinage of the second half of the 7th century (Grierson 1968).

⁴⁰ See *MIB*, III, Prägetabelle V.

⁴¹ *MIB*, III. Assemblages of dots appears also on the last issues of Heraclius, *MIB*, 122, 127.

⁴² Type 5, variant, in her typology, Baldini Lippolis 1999, 79. In the catalogue, page 180, the author mentions “ipotesi di produzione da parte di botteghe campane”.

⁴³ Using a coin would have resulted in an inverted image. The necropolis of Vicenne in Molise has offered a ring displaying a Roman *intaglio* set in a gold setting. The bottom of the setting, in contact with the finger, bears a copy of Lombard coin, see Arslan 1991, 344–345. Arslan proposes that this

sons of Constans II. The corresponding obverse die would have shown either their father and their senior brother or only the latter one during its personal reign (so, roughly, monetary types struck between 660 and 680). A closer examination of the die reveals the legend ending in – UI, followed by three dots.⁴⁴ This particular ending of the legend cannot be found on Sicilian coins, the only mint of Southern Italy.⁴⁵ On the contrary, it can be identified on the Ravennate coinage, both for Constans II and Constantine IV.⁴⁶ This reading testifies in favour of a location in Ravenna for the workshop which produced that jewel. Furthermore, on the “obverse” of the earring, the treatment of the feminine *cloisonné* face is perfectly reminiscent of the face displayed on a fibula *a pendaglio* now in the Walters Art Gallery (Baltimore) but found in Comacchio, at a short distance from Ravenna.⁴⁷ I let to specialists the task to clarify what we should do with other jewels of this type, but I would like to stress that this quite extraordinary piece points to the actual intervention of goldsmiths in the production of coinage exactly when the secret marks appear on the Ravennate coinage and when the mint loses its specific style.

Along with gold, Ravenna struck silver, a coinage that already occupied a very important position in the Ostrogothic kingdom, contrary to the East.⁴⁸ Up to the reign of Tiberius III (698–705), the mint issued small coins, often called generically *siliqua* from their initial weight of 144 to the pound, but whose mass regularly decreased, down to 1/8th or even 1/16th of the original ideal 2,25 g. This evolution could be attributed to a change in the relative value of gold and silver, but the magnitude of the decrease seems to me too important for this explanation to be accepted at face value.

Some tentative reconstructions of the relative values of metals of great interest have been proposed by Wolfgang Hahn and Michael Metlich,⁴⁹ but I find it difficult to follow their reconstruction for Italy. For the reign of Phocas, whose surviving specimens offer enough metrological data, they propose that a *folles* of 1/36th of the pound was linked to a silver coin of 1/960th of the pound and to the *solidus* through a Au/Ar ratio of 1/18 and a Au/Ae ratio of 1/1440 (so 20 pounds of bronze

ring was produced in the same workshop than the Senise jewels. I am not convinced by this hypothesis because of the obvious difference between the coins used. In my opinion, nothing forbade that a Roman or Lombard aristocrat owned artefacts of both Roman and Lombard production. The enamelled *cloisonné* of Comacchio of Baltimore (see note 47) obviously related to the Senise earring is certainly of Imperial provenance (Farioli Campanati 1982, 334).

⁴⁴ See photographs in Breglia 1941, pl. XLIII. Siviero 1954, 253; De Caro 1989, 219, n. 91, 91a.

⁴⁵ Either the types *MIB*, 94–96 for Constans II or the types *MIB*, 53–56 for Constantine IV.

⁴⁶ Constans II, *MIB*, 132 and Constantine IV, *MIB*, 54.

⁴⁷ They can easily be compared as they are illustrated on the same page in Pugliese Carratelli 1982, 337, n. 262 and 264.

⁴⁸ For the Ostrogothic coinage, see the synthesis offered by Metlich 2004

⁴⁹ See the metrological chapters in the various volumes of *MIB*, *MIBE* and *MIBEC*.

to the *solidus*).⁵⁰ In this light the small silver coin was worth 3 *folles* and a *solidus* worth 240 silver coins. Some points of the reasoning should be clarified or challenged. First, the value of bronze is inferred from the necessity to obtain a balanced system; we have no way of calculating it.⁵¹ Then, the catalogue itself points out that the weight of the silver coin was 1/864th of the pound (0,376g). Second, and more importantly, a letter of Gregory the Great establishes that the Au/Ar ratio in Italy was at the time of 1/12 and not 1/18.⁵² So the *solidus* was worth 144 silver coins, a value all the more convincing that it was “perfect” in the duodecimal system favoured by the Romans; it offered also a duodecimal value, 48, for the exchange rate with the main denomination, the *tremissis*, while the hypothesis with an Au/Ar 1/18 does not (80).⁵³ As said previously, we have no indication for the Au/Ae value, but we can admit, as Hahn and Metlich did, that the authorities settled for something balanced and manageable. In this case, three exchange rates are possible between the *solidus* and the *folles* that could make the silver coin useful: 576 (4 *folles* to the silver coin of 160 *nummi*, 16 pounds of bronze to the *solidus*); 720 (5 *folles* to the silver coin of 200 *nummi*, 20 pounds of bronze to the *solidus*) and 864 (6 *folles* to the silver coin of 240 *nummi*, 24 pounds of bronze to the *solidus*).⁵⁴ We cannot go further without a “leap of faith”. I would go for the last solution from three reasons. First it gives to the silver coin of Phocas a nominal value in line with its predecessors, marked CN (250 *nummi*) and PKE (125 *nummi*), but easier to manipulate because both duodecimal and strictly aligned on the *folles*. Second, this system (and this one alone) allowed also an immediate exchange rate between the silver coin and the Constantinopolitan *folles*, a useful accounting tool.⁵⁵ Third, 24 pounds of bronze to the *solidus* was also the value used at the time in Constantinople and, probably in Carthage,⁵⁶ even if the individual *folles* was heavier both in the East (13,5g) and in Africa (18g). One wonders if this parity was not a tool to facilitate exchanges of important sums between the prefectures. Whatever the weight of the local *folles* (and its adequacy to the local prices), accounting bronze by important weights was as easy as possible and this was important because gold and copper were the base for official accounting, not silver.⁵⁷ At least, that could have been the

⁵⁰ MIBEC, 12.

⁵¹ I stress this point not as a criticism obviously, we have to play with the cards we have been dealt.

⁵² An essential piece of evidence first pointed out by Durlat 1980, 138–154.

⁵³ 80 silver coins to the *tremissis*.

⁵⁴ I used here a pound of 325. There is no consensus on the exact weight, but I focus here on relative weights, so the absolute value of the pound has no impact.

⁵⁵ See below, 307.

⁵⁶ See Prigent 2015, 59–84.

⁵⁷ This fact is so important that Wolfgang Hahn proposed a very clever interpretation for the production of the “light-weight *solidi*” based on the necessity to have gold coins corresponding to bags of copper coins representing a standard weight of metal when the Au/Ae ratio was modified, Hahn

objective when the system was established, but we have no way to know how long it survived. I would like to stress nonetheless that the blatant failure of the hexagram in the West also speaks against an early alignment of the Au/Ar on the Eastern standard.

Now, if we take into consideration that during the 7th century the Italian bronze coinage (as everywhere in the empire) suffered a brutal debasement,⁵⁸ admitting that gold and copper were also in the West the real pillars of public accounting could help us explain the successive weight reductions of the silver coinage in simple terms. If the fraction of *siliqua* was considered as a multiple of the bronze coin and not directly as a subdivision of the gold, it would mechanically follow the course of its “reference coin” the *folles*, getting ever lighter for a same nominal value. That the silver coins may have continued to offer marks of value expressed in *nummi* as late as the reign of Heraclius would point in this direction, but we are treading here on very thin ice.⁵⁹ Nonetheless, I would like to offer one more calculation to illustrate what I have just said.

At the beginning of the reign of Heraclius, the weight of the silver coin seems to fall toward the 1/8th of the *siliqua* or 0,282 gr.⁶⁰ If I am right to think that this silver coin was aligned on the *folles* then it would still be worth 6 *folles*. With a constant Au/Ar ratio, a *solidus* would then be worth 1152 *folles*. Now in 615 it has been proposed that the weight of the Ravennate *folles* fell to 1/48th of the pound.⁶¹ This would precisely mean that notwithstanding the weight reduction of both the silver and bronze coinage, the *solidus*’s price in bronze remained stable at 24 pounds. So while the market received a more manageable coin, public accounting practices would have been unaffected. This is clearly extremely attractive but must remain hypothetical as long as we have no definitive study of the metrology of the *folles* for this period.

1989, 164–167. Zuckerman, 2004, 87–91, offered a very different explanation for the light *solidi*, linking them to the banking system of exchange between *solidi* and copper coins, but I am still convinced by Hahn’s position. Independently of the coins effectively used in a given province, a simple unified accounting mechanism throughout the empire was clearly of paramount importance to enact policy.

58 At least for its nominal value, we are unable to follow exactly the metallic value.

59 See the *MIB*, 151, and p. 9 tentatively attributed to Rome by Hahn who interprets the X under the cross as a mark of value of 10 *folles*. Note that the formula he proposes is once more based on the Au/Ar of 1/18. It is possible that the government tried to enforce it initially as he introduced the hexagram in Italy, but as I said, this coinage failed to find here the success he met in the East.

60 *MIB*, 155–157

61 I owe this information to the paper given by Morrisson and Callegher during the International conference of Byzantine Studies in Sofia in August 2011. They also proposed a step at 1/58th after 629 to allow for a smoother transition towards the very light coinage of Constans II. This problem was not offered space in the final version (Callegher/Morrisson 2015). Ranieri 2006, 157–160, gives also metrological data, with different results, but unfortunately he does not explain how he reached them.

As just seen, the metrology of the bronze coinage was also specific and we should understand it as a legacy of the previous Ostrogothic system. Only during a short while, at the end of the Gothic War, did the mint of Ravenna tried to espouse the higher weight standard of the East (1/18th of the pound). It was maintained under Justin II and we should now also take into account the existence of a military mint striking coins under this emperor with the mintmark RAV and the year 11,⁶² whose activity has been tentatively linked to the campaigns of Baduarius in Italy.⁶³ Nonetheless, the bronze coinage fell back to the lighter standard at least under the reign of Maurice (1/36th) with a short-lived intermediary step in the last years of Tiberius (1/24th⁶⁴). Before this clear reduction, the situation is difficult to assess because of the uncertainties surrounding the attribution of a quite peculiar type of coin. Its main characteristics are the absence of any mintmark and a metrology of 1/36th of a pound for the *folles*.⁶⁵ Provenances stem mainly from the Northern Adriatic. While most specialists concord in attributing them a Salonitan origin⁶⁶ and a date to the very last years of the Gothic War and slightly beyond, Ermanno Arslan attributed the series to Ravenna and proposed an earlier date, stressing that the light-weight should point toward a production simultaneous with the 1/36th of the pound *folles* struck in Rome in 536–539.⁶⁷ This last part of the hypothesis should be ignored as coins of the same design mention the name of Justin II⁶⁸ and considering the fact that for the last years of Justinian, we have a dated coinage in Ravenna (years 34 and 37) it is very difficult to insert the mint-less coinage into the Ravennate series. So the Salonitan provenance should be accepted. But it is also possible that another irregular issue preceded this Salonitan coinage in the same area. A series of *folles* dated year 14 of Justinian (540–541, *MIBE* 242) was also struck to the light-weight standard.⁶⁹ Although it displays the mintmark CON it is obviously not a product from the capital city. It has been tentatively attributed by Wolfgang Hahn to Sicily, but apart from one

⁶² Mansfield 2014, 205–212. The link with imitative half-*folles* displaying a P (*MIBE*, 97) is far from obvious to me, as I would rather identify it with a simplified version of the regular Latin P of the Antioch coinage (*MIBE*, 155, various version) than with a Greek R for Ravenna.

⁶³ The coins seem to come from Paphos, Cyprus, but an oriental origin is not really problematic here. Even the Salonitan coins are sometime discovered in the East, obviously brought back with the Imperial troops active in Italy. There was even a unit of “Ravennate” soldiers garrisoned in Egypt, a province with well-attested link to Cyprus.

⁶⁴ The mint struck only *decanoummia* so this is a “notional” *folles* based on the *decanoummion* of 1/96th of the pound.

⁶⁵ *MIBEC*, 248–251 and N224.

⁶⁶ Callegher 2011, 81–123. The attribution to Salona comes from Bellinger 1966, 187–189.

⁶⁷ Arslan 2005a, 225.

⁶⁸ A coin in the name of this emperor with the same characteristics has been published by Callegher.

⁶⁹ Hahn propose a very slightly lighter (1/37,5th of the pound) standard, but it is too complicated and I would rather accept loose quality control in the production than such a specific standard.

specimen in Catania, I know of no provenance from the island, while specimens are recorded in Northern Adriatic and a good number of them conserved in the Museum of Zagreb.⁷⁰ Considering the date (540–541), one wonders if this coinage was not produced for the needs of Belisarius' army around the time of the conquest of Ravenna.⁷¹ In which case, it would be the direct successor of the light-weight bronze struck in Rome.

Whatever the exact case, it is quite obvious that the Salonitan (and maybe the pseudo-CON) coinage enjoyed more popularity than the regular Ravennate coinage in the area. It has been identified as a “fiduciary coinage” whose metal worth was half its nominal value, but in this case it would have had difficulties imposing itself as widely as stray-finds testifies. I would rather think that its link to the former Ostrogothic metrology goes a long way towards explaining this success. In this study of Ostrogothic coinage Metlich gives legal weights for the *decanummion* varying between 1/60th and 1/100th of the pound, resulting in a “*follis*” between 1/15th and 1/25th of the pound. These were very unwieldy standards and in an, earlier, important study Ermanno Arslan offered a very detailed metrological study of Ostrogothic coinage, based on the assumption that a 15 *nummi* coin was produced, a position discarded by Metlich maybe too hastily. This identification enabled Arslan to stress the use of a “*follis*” of around 10g from Athalaric onwards (“Ae 6” to “Ae 16” in his classification) and falling around 9,58g under Baduela.⁷² In this context, the success in Northern Adriatic of a Byzantine coinage struck at an ideal weight slightly superior to 9g should not come as a surprise.

Furthermore, we should also ask in this context the exact role of a military mint. Obviously it was linked to the logistical needs of the army⁷³ and should probably be seen as a consequence of the raise of a new office, the so-called “ad hoc praetorian prefect” responsible for the provisioning of specific armies.⁷⁴ But, more importantly, it is as obvious to me that copper coins were useless to face the cost of the provisioning.⁷⁵ So I would rather identify the goal of the military mints with providing individual soldiers with the small change they needed in exchange for the gold, and silver, they earned as salary. What the individual soldier actually needed

⁷⁰ See the provenance listed in *MIBE*, 74, n. 389.

⁷¹ Politically it was especially important to be able to provide copper coins to the soldiers at this point: without enough supply to exchange easily their gold for copper, interaction with the local population would have been more prone to exactions and violence.

⁷² Arslan 2001, 5–13, See synthetic table p. 8 and pp.10–11

⁷³ I would like to stress nonetheless that the existence of the *moneta militaris imitativa* is a hypothesis formulated by Wolfgang Hahn. It has meet global acceptance because no other explanations for the strange coinages placed under this heading has been adduced, but it is still a hypothesis.

⁷⁴ Kaegi 1982, 87–113; Scharf 1991, 223–233 It is interesting to note that bronze coinage's production came precisely under the authority of praetorian prefects.

⁷⁵ In this regard, one should have a look on the numbers offered in Hendy 1969, 221–224 or to the detailed account of the Cretan expedition studied by Haldon 2000, 201–352.

was a coin that would be readily accepted amongst the population of the theatre of war he fought on, hence, maybe, the peculiar metrology of the “Salonitan” coins. It was also, by the way, the occasion of a healthy profit for the state as exchanging gold for bronze entailed a substantial cut.⁷⁶

The production of the Ravennate copper coinage continued up to the end of Imperial control over the city, and Callegher and Morrisson even stressed recently the importance of the production under the last emperor who controlled the city, Constantine V.⁷⁷ The evolution of the range of monetary types produced is very interesting from an economic point of view. Everywhere in the Empire, during the 6th and 7th centuries, the gold value of bronze decreased steadily, resulting in the progressive elimination of the small copper coins, namely *pentanoummia*, then *dekanoummia* and then half-*folles*.⁷⁸ The market value of these coins simply became progressively too low for their production costs. This process is a good indicator for the trend of nominal inflation and can also be observed in Italy but with an interesting twist.

Already in the 6th century, the mint of Byzantine Ravenna mostly produced *dekanoummia* and this implies that the greater part of the petty coinage in use was already old coins from the 4th and 5th century, or even earlier.⁷⁹ Around 600, *dekanoummion* stepped down as the half-*folles* became the main coinage. Under Constans II, the *dekanoummion* ceased to be produced altogether. Finally, from the first reign of Justinian II, with unimportant exceptions, only *folles* were struck in Ravenna.⁸⁰ So at first glance, we have three distinct steps with a clear increase of the nominal inflation in the second half of the 7th century.

However, the situation is a little bit different when we look at the coins actually found in Italy, notably in excavations. The half-*folles* seems to remain the dominant denomination for quite a long period.⁸¹ From Justinian to Maurice, the medium value

⁷⁶ See the beautiful explanation of the system in Zuckerman 2004; see also, but with a rather more obscure formulation, the interesting remarks offered by Carlà 2009, 367–378.

⁷⁷ Callegher/Morrisson 2015, 275.

⁷⁸ Classical demonstration in Morrisson 1988b, 239–253.

⁷⁹ On this phenomenon, see the contributions of Marani 2015–2016, 27–54, Rovelli 2015–2016, 55–72 and Saccocci 2015–2016, 161–182.

⁸⁰ There were some exceptions like a half-*folles* under Leontios (*MIB*, 40).

⁸¹ I used here the material compiled in Arslan 2005b, updated online. This remains the cornerstone of any study on Italian numismatics for the period and one should always stress how much we are indebted to the author for the incredible amount of work dedicated to its online update and decision to make it freely available to anybody. Bruno Callegher has gathered a much richer documentation but this calculation of the “average bronze coin” was not offered in Callegher/Morrisson 2015. Nonetheless it was possible to estimate it quite precisely for two reigns using the data in the text: fig. 4 gives a “annual survival rate” of 75,9 *nummi* and p. 274 the authors ascribe 108 coins to Heraclius, which together give an “average bronze coin” of 22,48 *nummi* for the reign. This result contradicts at first glance what I propose here but Callegher also use museum and local collections. In order to compare usefully, one should be able to have the result for the period 582–602, but the figure offered on p. 270 cannot be used.

of coin finds jumps from 10 *nummi* to 20. But under Heraclius, the “average bronze coin” remains around 22 and even during the reign of Constans II it rises only up to ca. 26. Furthermore in Rome the half-*folles* remained also dominant in Rome up to the 8th century.

The solution to this preponderance of the half-*folles* could be sought after initially in its metrology. At the beginning of the 7th century, before the chaos of the crisis, the Ravennate *folles* was struck at 1/36th of the pound. So it was not compatible with the *folles* of Constantinople, whose weight was 1/24th of the pound. On the contrary, as the half-*folles* weighted 1/72th of the pound, it had a simple relationship with the metropolitan coinage: 3 half-*folles* for 1 *folles*. Furthermore, if the reconstruction I proposed earlier is right, the system allowed also a simple exchange rate for the Ravennate silver coin: it was worth 12 Ravennate half-*folles* so 4 Constantinopolitan *folles*. If we take another bronze value for the *solidus* than 24 pounds, this is not possible.⁸² Similarly, the weight modifications at the beginning of the reign of Heraclius could have similar explanations, or at least could have taken similar concerns into consideration. Reducing the *folles* to 1/48th and the silver coin to 1/8th of the *siliqua* not only allowed to maintain their exchange rate and the bronze value of the *solidus*,⁸³ but also maintained a duodecimal exchange rate between the *solidus* and the silver coin with the Italian Au/Ar ratio (192 silver coins to the *solidus*) and introduced a duodecimal exchange rate between the Italian tiny silver coin and the Eastern hexagram (1/24) when using the Oriental Au/Ar ratio, which was not the case with the former weight standard of the silver coin and offered a powerful accounting instrument to the administration. All this, especially the last point, can be merely coincidental but I do not think so, it is exactly the kind of system the Byzantine liked to devise to smooth monetary exchanges.⁸⁴ So the Ravennate area needed the half-*folles* as its main currency in order to allow smooth exchange between Eastern and Italian coins of different metrologies AND to maintain the same value of the *solidus* in pounds of bronze in both regions of the Empire.

Obviously we cannot follow the system very late in the 7th century, things getting very chaotic and the materiel ever scarcer but the initial rationale for the preponderance of the half-*folles* could mirror exchange rates problems, which in turn could shed a new light on the strength of economic ties with the East. Improving our understanding of the monetary system of Byzantine Italy now demand a comprehensive metrological study of the surviving material.

⁸² With 16 pounds, the silver coin is worth 4 *folles* or 8 half-*folles*, with 20 pounds, it is worth 5 *folles* or 10 half-*folles*.

⁸³ As shown earlier, 303.

⁸⁴ See for example the system devised for the Sicilian coinage in the 8th century, Prigent 2012, 391–418.

Bibliography

- Arslan, Ermanno A. 1991. "Monete auree ed anello con castone da Vicenne", in *Samnium, Archeologia del Molise*, 344–345. Roma.
- Arslan, Ermanno A. 1999. "Il ripostiglio di monete auree beneventane e bizantine 'da Napoli 1896' nella collezione di re Vittorio Emanuele III", *Festschrift für Katalin Biro-Sey und Istvan Gedai zum 65. Geburtstag*, 237–253. Budapest.
- Arslan, Ermanno. A. 2001. "Il Nummus di Teodorico". *Antiquitas* 42/3: 5–13 (= *Zona Archeologica. Festschrift für Hans Peter Isler zum 60. Geburtstag*, edited by Sabrina Bruzzi et al.).
- Arslan, Ermanno A. 2002. "Considerazione sulla circolazione monetaria in età protobizantina a S. Antonio." *S. Antonino: un insediamento fortificato nelle Liguria bizantina*, edited by Tiziano Mannoni and Giovanni Murialdo, 242–243. Bordighera.
- Arslan, Ermanno. 2005a. "La zecca e la circolazione monetale". In *Ravenna da capitale imperiale a capitale Esarcale* (Atti del XVII Congresso Internazionale di studio sull'alto medioevo), 191–236. Spoleto.
- Arslan, Ermanno. 2005b. *Repertorio dei ritrovamenti di moneta Altomedievale in Italia (489–1002)*. Spoleto.
- Augenti, Andrea. 2005. "Archeologia e topografia a Ravenna: il Palazzo di Teoderico e la Moneta Aurea." *Archeologia Medievale* 32: 7–33.
- Baldini Lippolis, Isabella. 1999. *L'oreficeria nell'impero di Costantinopoli tra IV e VII secolo*. Bari.
- Bellinger Alfred R. 1966. *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection, I (491–602)*. Washington DC.
- Bellinger, Alfred. R. 1966. *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection, I (491–602)*. Washington DC.
- Blet-Lemarquand, Maryse, Bompaire, Marc and Morrisson, Cécile. 2010. "Platine et plomb dans les monnaies d'or mérovingiennes: nouvelles perspectives analytiques." *Revue Numismatique* 166: 175–198.
- Bompaire, Marc, Cardon, Thibault, Geneviève, Vincent and Marani, Flavia, eds. 2015–2016. *Les trouvailles de monnaies romaines en contexte médiéval* (Actes du colloque tenu à l'Ephe Paris, 27–28 février 2015), in *Journal of Archaeological Numismatics* 5/6, Bruxelles.
- Breglia, Laura. 1941. *Catalogo delle oreficerie del Museo Nazionale di Napoli*. Roma.
- Callegher, Bruno. 2004. "Da Ravenna alla Sicilia. Da Giustiniano a Giustino II: alcune considerazioni sul decanummo MIB 238." *Νέα Πώμη. Rivista di ricerche bizantinistiche*, 1: 101–117.
- Callegher, Bruno. 2005. "La diffusione della moneta di Ravenna tra VI e metà VIII secolo." In *Ritrovamenti monetali nel mondo antico: problemi e metodi*, edited by Giovanni Gorini, 247–272. Padova.
- Callegher, Bruno. 2011. "Emissioni in rame d'epoca giustiniana in area adriatica. Il ruolo di Salona." *Atti e Memorie della Deputazione di Storia Patria per le Marche*: 81–123. Ancona.
- Carlà, Filippo. 1988. *L'oro nella tarda antichità: aspetti economici e sociali*. Torino.
- De Caro, Stefano. 1989. *Il Museo archeologico nazionale di Napoli*. Napoli.
- Durliat, Jean. 1980. "La valeur relative de l'or, de l'argent et du cuivre dans l'empire protobyzantin (IV^e-VIII^e siècle)." *Revue Numismatique* 22: 138–154.
- Fairhead, Niall and Hahn, Wolfgang. 1988. "The Monte Iudica Hoard and the Sicilian Moneta Auri under Justinian I and Justin II." In *Studies in Early Byzantine Gold Coinage*, edited by Wolfgang Hahn and William E. Metcalf, 29–39. New York.
- Farioli Campanati, Raffaella. 1982. "Le arti suntuarie. Smalti, oreficeria, lavorazione dei metalli (VII-IX secolo)." In *I Bizantini in Italia*, edited by Giovanni Pugliese Carratelli, 333–359. Milan.
- Grierson, Philip. 1959. "The *Patrimonium Petri* in illis partibus and the pseudo-imperial coinage in Frankish Gaul." *Revue Belge de Numismatique et Sigillographie* 105: 95–111.

- Grierson, Philip. 1968. *Catalogue of Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collection*, II (641–717). Washington DC.
- Grierson, Philip and Blackburn, Mark. 1986. *Medieval European coinage. With a catalogue of the coins in the Fitzwilliam Museum. 1. The early Middle Ages (5th–10th centuries) (MEC)*. Cambridge.
- Hahn, Wolfgang. 1981. *Moneta Imperii Byzantini (MIB)*. III. Wien.
- Hahn, Wolfgang. 1989. “Zur Frage der reduzierten Solidi unter Justinianus I”, *Geldgeschichtliche Nachrichten*, 24: 164–167.
- Hahn, Wolfgang and Luegmeyer, Andrea. 1992. *Der langobardenzeitliche Münzschatzfund von Aldrans in Tirol*. Wien.
- Hahn, Wolfgang and Metlich, Michael A. 2000. *Money of the incipient Byzantine Empire (Anastasius I – Justinian I, 491–565), (MIBE)*. Wien.
- Hahn, Wolfgang and Metlich, Michael A. 2009. *Money of the incipient Byzantine Empire II (Justin II – Revolt of the Heraclii, 565–610), (MIBEC)*. Wien.
- Haldon, John. 2000. “Theory and Practice in 10th Century Military Administration: Chapters II, 44 and 45 of the Book of Ceremonies.” *Travaux et Mémoires*, 13: 201–352.
- Hendy, Michael F. 1969. *Studies in the Byzantine Monetary Economy c. 300 – 1450*. Washington DC.
- Jarnut, Jörg and Strothmann, Jürgen, eds. *Die merowingischen Monetarmünzen als Quellen zum Verständnis des 7. Jahrhunderts in Gallien*. Paderborn.
- Kaegi Walter E. Jr, 1982. “Two Studies in the Continuity of Late Roman and Byzantine Army.” *Byzantische Forschungen* 8: 87–113.
- Kent, John. 1994. *The Roman Imperial Coinage, X. The Divided Empire and the Fall of the Western Parts, A.D. 395–491*. London.
- Lafaurie, Jean and Morrisson, Cécile. 1987. “La pénétration des monnaies Byzantines en Gaule mérovingienne et visigothique du VI^e au VIII^e siècle.” *Revue Numismatique* 46: 38–98.
- Mansfield, Stephen John 2014. “A Byzantine Temporary Mint and Justin II’s Lombard Campaign.” *Numismatic Chronicle* 174: 205–212.
- Marani, Flavia. 2015–2016. “La position du problème en Italie.” In *Les trouvailles de monnaies romaines en contexte médiéval = Journal of Archaeological Numismatics* 5/6: 27–54.
- McCormick, Michael. 2013. “Coins and the economic history of post-Roman Gaul: testing the standard model in the Moselle, ca. 400–750”, in Jarnut, Jörg and Strothmann, Jürgen, eds. *Die merowingischen Monetarmünzen als Quellen zum Verständnis des 7. Jahrhunderts in Gallien*, 337–376. Paderborn.
- Metcalf, David M. 1988. “For what purpose were Suevic and Visigothic tremisses used?” In *Problems of Medieval Coinages in the Iberian Area*, 3, edited by David M. Metcalf and Mário Gomes Marques, 15–34. Santarem.
- Metcalf, David M. 2006. “Monetary circulation in Merovingian Gaul, 561–674.” *Révue Numismatique* 162: 337–393.
- Metlich, Michael A. 2004. *The coinage of Ostrogothic Italy*. London.
- Morrisson, Cécile. 1970. *Catalogue des monnaies byzantines de la Bibliothèque Nationale*, 2 vols. Paris.
- Morrisson, Cécile. 1988a. “Carthage: The Moneta auri under Justinian I and Justin II (537–578).” In *Studies in Early Byzantine Gold Coinage*, edited by Wolfgang Hahn and William E. Metcalf, 41–64. New York.
- Morrisson, Cécile. 1988b. “Carthage, production et circulation du bronze à l’époque byzantine d’après les trouvailles et les fouilles”, *Bulletin de la Société Nationale des Antiquaires de France*, 239–253. Paris.

- Morrisson, Cécile. 2001. "Moneta, kharage, zecca: les ateliers byzantins et le Palais Imperial." In *I Luoghi della moneta. Le sedi delle zecche dall'antichità all'età moderna*, edited by Lucia Travaini, 49–58. Milano.
- Morrisson, Cécile. "L'atelier de Carthage et la diffusion de la monnaie frappée dans l'Afrique vandale et byzantine (439–695)." *Antiquité Tardive* 11-2: 65–85.
- Morrisson, Cécile and Callegher, Bruno. 2015. "Ravenna: le déclin d'un avant-poste de Constantinople à la luère de son monnayage (v. 540–751)." *Cahiers de recherches médiévales et humanistes*, 28: 255–278.
- Prigent, Viven. 2012. "Monnaie et circulation monétaire en Sicile du VIII^e siècle à l'avènement de la domination musulmane." In *L'héritage byzantin en Italie (VIII^e-XII^e siècle)*. II, *Les cadres juridiques et sociaux et les institutions publiques* (Collection de l'École française de Rome, 461), edited by Jean-Marie Martin, Annick Peter-Custot and Vivien Prigent, 391–418. Roma.
- Prigent, Vivien. 2013. "La circulation monétaire en Sicile (VI^e-VII^e siècle)." In *The Insular system of Early Byzantine Mediterranean: Archaeology and History*, edited by Demitrios Michaelides, Philippe Pergola, Enrico Zanini, 139–160. Oxford.
- Prigent, Vivien. 2015. "Production et circulation monétaire dans le bassin central de la Méditerranée au VII^e siècle." In *Histoire et archéologie (péninsule Ibérique – Maghreb, VII^e-XI^e siècle)*, edited by Philippe Sénac and Sébastien Gasc, 59–84. Toulouse.
- Prigent, Vivien. 2016. "A Striking Evolution: the mint of Ravenna during the Early Middle Ages." In J. Herrin, J. Nelson (eds.), *Ravenna. Its Role in Early Medieval Change and Exchange*, edited by Judith Herrin and Jinty Nelson, 151–161. London.
- Prigent, Vivien. Forthcoming. "Mints, Coin production and circulation and the Byzantine army in Italy (6th-11th century)." In *A Companion to Byzantine Italy*, edited by Salvatore Cosentino.
- Pugliese Carratelli, Giovanni. 1982. *I Bizantini in Italia*. Milano.
- Ranieri, Egidio. 2006. *La monetazione di Ravenna antica dal V all'VIII secolo: impero romano e bizantino, regno ostrogoto e longobardo*. Bologna.
- Ricotti Prina, Diego. 1972. *La monetazione aurea delle zecche minori bizantine dal VI al IX secolo*. Roma.
- Rovelli, Alessia. 2015–2016. "The Circulation of Late Roman Bronze Coinage in Early Medieval Italy: An update." In *Les trouvailles de monnaies romaines en contexte médiéval = Journal of archaeological numismatics* 5/6: 55–72.
- Saccocchi, Andrea. 2015–2016. "La circolazione di moneta bronzea tardo-romana e bizantina in Italia Settentrionale: non soltanto una questione archeologica." In *Les trouvailles de monnaies romaines en contexte médiéval = Journal of Archaeological Numismatics* 5/6: 161–182.
- Scharf, Ralf. 1991. "Praefecti Praetorio Vacantes-General Quartiermeister des Spättrömischen Heeres." *Byzantinische Forschungen* 17: 223–233.
- Siviero, Rodolfo. 1954. *Gli ori e le ambre del museo nazionale di Napoli*. Firenze.
- Werner, Joachim. 1935. *Münzdatierte austrasische Grabfunde*. Berlin.
- Zuckerman, Constantin. 2004. *Du village à l'empire. Autour du registre fiscal d'Aphroditô (525/526)*. Paris.

John Haldon

11 Concluding Remarks. One

Ravenna – now the capital city of the like-named province of Ravenna – lies in the Emilia Romagna region of Northern Italy. Seat of western Roman emperors from 402 until 476, it became the capital of the Ostrogothic Kingdom until its recovery by the forces of the eastern Roman emperor Justinian in 540. From the 560s it became headquarters of the Exarchate of Italy, effectively a military governorate, until in the 750s it became the seat of the Kingdom of the Lombards. Situated at a cross-roads connecting N.E. Italy with the N.W. Balkans on the one hand and with central and western Italy on the other, connected through its port at Classe with the Mediterranean and its complex network of trade routes and long-distance communications, it was an important centre of production as well as an entrepôt in its own right, quite apart from its crucial role as a military and naval base in the N. Adriatic for the eastern Roman or Byzantine state. Yet in spite of the details of these relationships at ground-level, so to speak, it is easy to subsume Ravenna into a larger and more generalised picture of early medieval Adriatic and Italian politics and to marginalise both local as well as supra-local cultural history, social, and economic connections.

Indeed, while it was in many respects an exceptional city, remarkable for its impressive public art and architecture of the 5th and 6th centuries, and while it has preserved a wide range of evidence of many different kinds, its role in Italian history after the 8th century has often been under-appreciated, dismissed in the older literature as a decaying backwater of little relevance to the mainstream of Italian peninsular development. Yet the evidence we find in this book indicated not just substantial areas of continuity but also a flourishing local society with continued connections with a wider international, or at least pan-Mediterranean, network of commercial and cultural contacts across the longer period under examination. Recent archaeological work has shown that during the period from the 7th to the 9th century buildings were rebuilt and restored and roads were both maintained and rebuilt. And although it has often been assumed that maritime commerce dried up as a result of the silting up of the harbour at Classe, more recent research indicates, first, that this occurred later than supposed, and second, that even when the process of silt accumulation was more advanced, shipping traffic was moved to jetties along the rivers and urban canals of the city. Ravenna was able to preserve its trade along the Adriatic coast as well as with the cities of its Lombardy hinterland. From the later 9th century, and with substantial changes in the maritime environment (rise of Islamic sea-power, rise of competitor trading and commercial centres in N. Italy, retreat of Byzantine naval power from the N. Adriatic) it came to depend upon its Italian hinterland more than its maritime connections, but throughout it remained a city that can tell us a great deal about the nature of late antique and

early medieval urbanism and the ways in which local culture and economy interacted with a broader horizon. One reason for this is that it continued as a major focus for literary production, in which liturgical, hagiographical, geographical, medical and a range of ecclesiological works were produced and/or copied. And as one of the papers noted, Ravenna is home to a very substantial corpus of documents of different kinds, including some 100 papyri and many documents on parchment, indeed Ravenna preserves the second greatest number of documents from early medieval Italy after Lucca.

I was asked to make a few concluding remarks during the original conference in 2013, and although some time has now passed, and the contents of this volume are somewhat changed from the range of presentations at that meeting, it has been a fascinating exercise reviewing my notes from the meeting and comparing them with what we now see in the present publication. I would like to highlight two key aspects that struck me as valuable outcomes. First, the published papers, as well as the original conference presentations, nicely illustrate the point made above about not subsuming local developments in Ravenna too readily into the big picture. With a focus on evidence from Ravenna and its hinterland and new and recent research into various aspects of production and crafts in and around the city, the presentations underlined the fact that Ravenna continued throughout Late Antiquity and well into the mediaeval period to have a role within a much wider network of commercial relationships and international maritime connections, but that this role, and the ways in which it impacted upon local society, the church and politics changed in emphasis over time as the world of which Ravenna was a part changed in its turn. These nuances and shifts in emphasis are reflected in the composition of Ravennate society, in its relationship with the outside world and in particular with Rome and with Constantinople, as well as in all aspects of artisanal and industrial activity – ceramic, marble and ivory production, for example, to name but three areas that were represented during the conference – industries or crafts which at the same time illustrate the vicissitudes in the city's political and economic situation. A significant outcome of the presentations and the discussion was how important it is to consider these last aspects within their wider context both in order to understand the changes and shifts that they underwent as well as how those changes themselves indicate changes in Ravennate society, culture and economy more generally.

Second, particularly significant, if perhaps also predictably so, in the overall history of the city from the 5th century on was the role of the state, first as the capital of the western empire and later as the headquarters of the exarchate in particular, and both the coinage minted in the city as well as its position in the broader network of Byzantine strategic concerns bring this out very clearly. Key institutions of the East Roman/Byzantine state continued to function until 751, including the fiscal apparatus and the use of a multi-denominational gold and bronze coinage alongside a sophisticated administrative apparatus (in which the elite was heavily

invested) – the evidence of the Ravennate coinage and mint activity makes this especially clear. As the capital city of the Western Roman Empire for 250 years and a major port of entry for the Eastern empire, Ravenna reflects in its art and architecture a fusion of Roman and Balkan and eastern Mediterranean forms. During the years of the Ostrogothic kingdom, with its capital at Ravenna, public buildings and churches built for or served by the Arian clergy competed with former imperial monuments, and the re-establishment of imperial rule thereafter saw this trend continue. But it is not just in terms of material culture that Ravenna offers important insights into the nature of late antique and early medieval urban culture, since writing and literacy were likewise significant elements in its cultural composition and identity, and the crucial role of the church and in particular the power and authority of the bishops of Ravenna represented a central facet of this as well as the city's economic life.

The conference also had a chronological aspect, and illustrated two broad aspects of the city's social, economic and cultural evolution: its place in the wider story of N. Italian and central Mediterranean developments up to the end of the 6th century, with its role as an imperial capital and then a royal Ostrogothic centre as key features influencing local society as well as commerce and production; and second, how the city evolved in the course of the later sixth through into the 9th century, as its political fortunes were transformed by the establishment of the exarchate, the arrival and challenge of the Lombards, the difficult situation that the government at Constantinople had to confront, especially following the economic and political dislocation resulting from the Arab-Islamic conquests. In this last respect the study of the social, economic and cultural history of Ravenna from the later 6th century until the middle of the 8th century has proved to be especially important in a comparative context, since the unusually well-preserved archive of papyrus documents that throws light on both the government and administration of the city under the Exarchate as well as on the lives of individuals has been extraordinarily helpful in efforts to understand what was happening in other, less well-documented parts of the eastern Roman world. Since there was a shared legal, institutional and administrative framework across the empire, this serves as a useful starting point from which to use the case of social development in the exarchate as a basis for comparing what happened during the course of the 7th century in Constantinople and Anatolia. The fate of the late Roman social elite and its evolution into the middle Byzantine period in the heartland of the Byzantine empire is far less easily followed for lack of written evidence but, using the parallel development of the social elite within the exarchate, it is possible to re-evaluate the sketchier evidence from Constantinople and its hinterland and make better sense of developments within the mediaeval eastern Roman world. The 580s represents the point from which society in Ravenna became increasingly dominated by the military and officials – although, has also been shown very clearly, this new element rapidly assimilated with the established social

elite of civilian landowners and their traditions. While similar developments set in at a later date in the east, the parallels are extremely informative.

What is important to note here, of course, is the perhaps obvious point that the common, if regionally-varied starting point for what happens across all the lands of the eastern empire after the later 6th century generated both similar and also very different trajectories in different spheres of social and cultural life, according to pre-existing regional and local traditions and habits as well as geographical and strategic location. On the one hand, the institutional power and wealth of the church of Ravenna, through its close contacts with the empire, its landed properties and the fiscal demands placed upon them, promoted relationships with the secular world that are remarkably similar to those that evolved in other parts of the Byzantine world. On the other hand, such developments took place in a specific regional environment, in particular in respect of the geographical closeness of the papacy, forcing the bishops of Ravenna to pay far greater attention to local papal politics and to function as both a bridge between Constantinople and Rome and at the same time placing them in an often difficult and always precarious situation with respect to ecclesiastical politics.

Yet at the same time the evidence for the ways in which Ravennate society evolved its own forms of production to meet both local and more distant markets – among other aspects the book examined the production of ivories, for example, as well as architectural elements, ceramics, coinage and that most basic of constructional elements, bricks – throws important light on its immediate hinterland as well as Ravenna's changing and evolving role supra-locally and internationally. The ways in which the acquisition, shaping and use of stone and marble changed over time exemplifies this situation in many respects. Here we learned that sponsors, donors and builders of monuments deployed both *spolia* and newly-commissioned materials, depending upon the availability of marble or other types of stone as well as the financial resources of the patrons, with the relationship between the two closely paralleling the broader pattern of Ravenna's geo-political and economic situation across the centuries in question. At the same time, and indicative of the local political situation, evidence from monuments within and around the city show how the court or urban administration was able to exploit the materials taken from earlier monuments, especially clear from the constructions during the period of Ostrogothic rule. The Church of Ravenna adhered in large part to metropolitan – Constantinopolitan – models, as illustrated in its own impressive architectural commissions, aimed no doubt at emphasising the imperial and patriarchal associations with Constantinople at the same time as underscoring the wealth and prestige of the bishops of Ravenna themselves. In this respect Ravenna shared an approach found across the late Roman world to the exploitation of earlier buildings and finished material, in which standing or semi-derelict structures served in effect as a ready-made quarry. Often interpreted as in some way a 'decline' in both standards of craftsmanship and in civic culture, such practices are probably far better understood as reflecting shifting cultural

priorities and values and a redirection of urban culture and resources towards new ends, in particular as regards the construction of buildings associated with the church and with Christianity more broadly, with changed perceptions about how to use public space, and indeed shifting definitions of ‘public’ as against ‘private’.

A number of papers highlighted this aspect of Ravenna’s changing role across several centuries, as well as shifting patterns of belief and the ways in which these were reflected in cultural activity: burial practices, for example, and the deployment, quality and character of grave goods is one important facet of this, of course. Late Antiquity saw a significant evolution in burial practice, with less separation and greater shared space between dead and living, and a more visible impact of the presence of the dead on the uses and forms of urban public spaces. All of this indicates new ways of conceptualising society and its relationship to the afterlife, so that burial practice and the location of cemeteries and graves can provide significant evidence about belief, ritual, social change and the organization and topography of urban space. Much of this has been intensively studied in recent years, but as in other respects, funerary practice and burial habits in Ravenna reflected both a broader set of general developments and at the same time exemplify a specific local inflection of such developments, determined by local resources, cultural tradition and inter-regional influences.

The book thus opened up new questions about cultural developments within a changing, and challenging, world, and at the same time illustrated how Ravenna, a city that is both unique in its particular history and yet also in many respects characteristic of the urban culture of the late Roman and early mediaeval world reflected local as well as wider changes in political situation and inter-regional economy. It showed how influences from far afield impacted on local products and how Ravennate society responded and reacted to the challenges it confronted in maintaining or adjusting its urban infrastructure. Yet it also underlined the point that Ravennate society and institutions were not subject to any sudden or catastrophic changes, either with the establishment of the exarchate or after 751, when the Lombard king Aistulf finally took the city. The survival of Roman-Byzantine institutions is substantial, as is the degree of continuity within the social elite and the titles which reflected their role and social status, at least from the end of the 6th century. And this continuity transcends the political changes that occurred with the arrival of the Lombards in 751 – formerly Byzantine titles and ranks may have been largely honorary, but the more powerful families continued to use them and it is clear that some offices recurred in certain families – not unlike the very similar evolution that took place in other formerly or nominally imperial (Byzantine) cities and territories such as Amalfi, Gaeta, Naples or Venice.

Through the study of shifts in demand, production organisation and priorities, and changing markets, the book suggested how the mass of the urban populace and the city elite(s) dealt with pressures from without as well as those resulting from changing patterns of power relationships within the city; and how the state

and the church played key roles in the evolution of the city, determining in consequence the configuration of society with which it entered its post- imperial world after 751. That Ravenna's economy contracted after the 6th century there is little doubt, but that the city went into an absolute decline thereafter seems now largely disproved. To the contrary, the archaeological evidence together with the evidence for crafts and artisanal activities that was presented and discussed during the conference, limited though it may be, shows that the city remained a positive environment for small-scale commodity and craft production of many kinds, as well as somewhat larger-scale manufacturing (in the case of pottery, for example). And this was the case not only for the period up to 751, but during the following centuries also. Finally, the various papers, through their different approaches and often very different types of evidence, showed just how important it is to relate material cultural, written, and environmental/archaeological data together in order to generate a more complete – and more complex – pattern that can explain how and why things changed in precisely the way they did across the centuries in question.

Judith Herrin

12 Concluding Remarks. Two

The broad title of this very interesting conference promised a closer investigation of how work was done, objects were made, culture preserved and extended in Ravenna during the period of Late Antiquity, here often taken to be synonymous with early Byzantium. And the papers that resulted do much to illuminate these issues, ranging from the changing geography of artefact production across the Mediterranean world to the specifics of ivory carving and coin production in Ravenna. They emphasize the enormous change that occurred when the city became an imperial capital in 402; the capacity of the newly implanted court to attract skilled craftsmen, scholars, soldiers of fortune, entertainers of all kinds, while it generated an increased demand for luxury goods as well as basic everyday objects.

Among the many ways of exploring these traditions of craftsmanship in late antique Ravenna, taking artefacts known to have been produced in the city should be significant. Here are the bricks made in vast numbers to construct nearly all the city's monuments, many of them stamped with the names of factories or individuals who commissioned their production for particular buildings. Also, local ceramics, made for immediate use by the inhabitants of the city, and the coins minted in Ravenna that they used to buy expensive objects. In contrast, many of the marble columns, capitals, and plaques for floor and wall covering appear to have been imported from Constantinople and Istria, no doubt reflecting the prestige of material from Proconnesos, an island in the sea of Marmara, which was widely used for buildings in the capital, but also a measure of the lack of local marble. In a contrary motion, parchment for writing could be made locally but was reserved for Bibles and important liturgical or ceremonial books, while papyrus imported from Egypt or Sicily was used for the many documents, wills and other legal arrangements that filled the municipal archive.

Another way of investigating labour and materials in late antique Ravenna would be to examine the surviving buildings erected by local workers: not only churches, but palaces, villas, roads, bridges, canals, aqueducts, where reused spolia may reflect attachment to ancient elements, or shortage of building blocks, or simply a desire to reuse a fine object, such as the porphyry bath that became a sarcophagus for King Theoderic. Such reuse of building materials is well documented in Ravenna where after the transfer of Gothic Arian churches to the 'orthodox/catholic' community in the mid-6th century, elements from particular Arian buildings were thus reemployed. Agnellus, the local antiquarian and abbot of the monastery of St Bartholomew in the first half of the 9th century, admits to the same practice in his own time, while complaining bitterly about Charlemagne and later emperors who removed not only building slabs but also the great statue of the Gothic king that had stood outside his palace for 200 odd years.

A further method of documenting the labour available in the city is to study the workers who can be identified with their trades – the bakers, scribes, cobblers, goldsmiths, glassmakers, dyers – and those in the construction industry who erected such striking monuments – the engineers, masons, marble workers, carpenters, plasterers, mosaicists and painters. And beyond the mention of individuals is it possible to identify craft guilds, where skills were passed from master to apprentice? From father to son? From mother to daughter? In a city dominated by its spectacular mosaic decoration, is there any evidence about the teams of workers who must have scaled the heights to decorate the domes, apses and walls of so many buildings? Deborah Deliyannis suggests that the term *adiutor*, used in relationship with a *forensis*, implies an apprentice system, whereby scribal traditions were passed from an expert in post to a younger member of guild.

The patrons who financed the buildings could also repay investigation – not only bishops who could draw on the very substantial resources of the see of Ravenna, but the bankers or money-changers (*argentarii*), who feature prominently in city's collection of papyrus records. They include the famous Julianus, whose 26,000 solidi went into the construction of San Vitale, and a woman, Susanna, who commissioned a funerary epitaph for her husband Isaac the eparch, and perhaps another for his nephew, who died young. These are two of the Greek inscriptions that testify to a bilingual background, faithfully recorded by the workers who carved the desired text. While so much evidence has been lost, much was copied down by Agnellus and included in his account of the bishops of Ravenna, written in about 838 as Isabella Baldini points out. Whatever modern scholars may criticize in his Latin, he also performed an immense service by looking closely at many painted inscriptions, others carved on stone or recorded in mosaic and preserving them in written form.

The conference and resulting volume fully confirm the value of such approaches. Both were organized by Salvatore Cosentino whose guiding spirit is evident throughout. His impressive contribution on the socio-economic organization of labour analyses the environmental problems of building in a marshy swamp, the changing population of the city and the resources of both the imperial court and the church, which made Ravenna a finance capital in Late Antiquity. In a detailed examination of the structure of work he collects evidence of the precise expertise available. Here are the boot makers, also known to Agnellus (who specifies the use of goat hide for particularly large boots, *magnas zancas ex hircoum pellibus*),¹ and a whole host of workers with professional skills: *architecti* (engineers), *argentarii* (bankers), *bracarii* (producers of trousers), *ceraearii* (producers of wax), *chrysokatallaktai* (moneychangers), *forenses* (public writers), *gunnarii* (producers of cloth), *(h)orrearii* (keepers of granaries), *libripendes* or *libripenses* (people responsible for weighing), *marmorarii*

¹ *LPRa*, 70.

(marble merchants), *medici* (physicians), *monitarii* (money engravers), *navicularii* (shipowners), *negotiatores* (tradesmen), *olosiricopratae* (silk merchants), *pistores* (bakers) and *sapunarii* (soapmakers). The specific features of this internal examination is broadened by the links created between the church of Ravenna and its often far-flung estates, primarily in Sicily, symbolised by the bilingual seal of Barbatus, a rector of the church, found in the island. Through the exploitation of these agricultural resources bishops of Ravenna remained powerful leaders even in the 8th century, when the city declined into a less vibrant economic centre.

Among the many contributions to this volume that touch on creative skills, Glenn Peers emphasizes “craft’s self-knowing process, a doing that thinks”, as a force independent of the craftsman who is considered the maker. He examines basket weaving as an example of the “dynamic relationship” between material and maker within a technology that has not changed much since ancient times and reminds us that most skills are learned by watching, imitating and experimenting. In order to cover the walls of churches with mosaic decoration, teams of workers must have cooperated in the preparation of the tesserae, the plaster base into which the tesserae were set, at the correct angle to reflect the light on a curved surface, and with regard to the viewer perhaps a long way below – a plethora of factors in the making of an apse mosaic such as that at Sant’Apollinare in Classe. The suggestion that Ravenna may have had a workshop devoted to the arts of mosaic decoration seems very likely. But in addition, entire families were probably employed in the process – women and children to cut and sort the different sizes and colours of the marble, glass or stone to be set, perhaps also to fill in the background once the main figures had been outlined. In this case, the apprentice may have started working in a family business at a very young age.

Was this also the common background of most tradespeople? The head of the guild of bakers, Apolenaris, had a son of the same name who became chancellor to the prefect Longinus. But perhaps he had another son who inherited his position in the business of baking? Roman legal rulings suggest that skills should be passed from father to son, in the same way as military responsibilities. And it seems more than likely that many of the undocumented female skills, of the midwife, for example, were transmitted by mother to daughter. While not all these facets of the organization of labour were covered at the conference, this volume brings together a number of very helpful suggestions about possible guild activity.

Because there is no trace of ivory carving in the city, in the form of scraps of material or unsuccessful wasters, it has been assumed that Ravenna had no ivory production at all. While the magnificent throne made of so many large pieces of tusk and identified by Archbishop Maximian’s monogram does appear to have been imported from the East, possibly under imperial patronage, Maria Cristina Carile argues that some ivory objects were made in Ravenna. The association of Berlin ivories with this throne, with the same episcopal monogram, may suggest that the first archbishop of the city, imposed by Emperor Justinian I, brought such luxury

products with him when he came to the city. By drawing on the clear evidence for architects and craftsmen moving from place to place, she convincingly posits the existence of ivory carvers in the city, producing work for the court and the aristocratic elite that wished to keep up with styles set in the imperial capital in Constantinople.

Recent archaeological finds at Classe show that bone was carved there, with decorated plaques and combs among the grave goods discussed by Debora Ferreri; they were often placed behind the head of the deceased. She also notes the maximum price payable for a comb, as fixed by the Price Edict of Diocletian in 299: 14 *denarii*. The majority of combs found in Classe/Ravenna area are two-sided antler composite combs which require a labour-intensive method of working. The bone atelier at Classe identified by many half-finished and waste fragments was in the courtyard of one of the warehouses – pins, needles, games pieces, dice, plates and decorative elements for small containers were also found. Knives are just as common, often attached to the belt from which they were hung. In the 7th century some of the warehouses at Classe were transformed into craft centres for glass and wood processing, and production of ceramic, mortar and metal. The realization that through Classe Ravenna retained its contacts with the East Mediterranean for much longer than had been assumed, also draws attention to the possible import of raw materials like ivory from African elephants, jewels used in polychrome cloisonné working and silk, another highly desirable material.

Pottery, if made locally could be a mirror of everyday life representing the culinary capacity and restrictions of Ravenna's labour force. But most was imported and Chiara Guarnieri traces the rise and fall of imported ceramic wares from the 5th to the 8th century. As a reflection of everyday life, cooking pots and basic tablewares are surely one of the most significant measures, so it is interesting to note the steady slow decline of imported African Red Slip Ware, dominant in the fifth century, much less common 200 years later. It is gradually replaced by locally produced glazed wares. Although portable ovens, *clibani*, continue in use, and casseroles imported from Cyprus arrived into the 7th century, most cooking pots are made of Alpine soapstone, indicating supplies of material from the north of Italy.

Guarnieri details the proportions of imported pottery from North Africa, the East Mediterranean Anatolia, the Aegean and Cyprus/Cilicia/Rhodes. Local production of lamps that imitate those from North Africa is documented from kilns at S. Arcangelo, Forlì, but there is no local production of amphorae. The Byzantine occupation of Ravenna in 540 brought changes to culinary habits and patterns of food consumption that affected both the form and dimension of local pottery production (mainly small dishes and bowls). Large ceramic platters that imitate metal dishes used for serving food at banquets became a status symbol. By the 7th century when there are fewer imports overall, the role of Classe/Ravenna becomes one of consumption rather than exchange and distribution. Samos cistern-type amphorae and globular amphorae, smaller in size and lighter than previous types, continued

to be imported, possibly in smaller ships, but larger amphorae traditionally used for storing wine, decline. Did local people begin to use wooden barrels for their vintage? Some household products made without the use of a potter's wheel account for cooking wares.

These conclusions fit well with Paul Arthur's very impressive introductory chapter on the production of artefacts, which shows a decline from 5th century commercial competition between different regions of the Mediterranean. This survey of the late antique centres of production, identified by kilns and wasters, traced through the transport of amphorae to places like Ravenna which lacked the means of producing such storage jars, demonstrates a world originally dominated by African Red Slip Wares, which gradually gave way to more restricted local production of imitative fine wares. These were then distributed through a thriving local economy with local markets, *nundinae*.

It would be interesting to compare ceramic production with cloth – since woolen, linen and clothing made of animal skin must have been another very significant marker of everyday life. References to linen and silk clothing, golden belts and furs, suggest the most elegant clothing for the elite, while ordinary people made their own from sheeps' and goats' wool. The existence of numerous loom whorls confirms local weaving, but all silk must have been imported from the East Mediterranean. The presence of a *tinctor* suggests a dyeing industry and alum was imported to fix colours.

Burials constitute another social custom susceptible to change, as noted by Ferrari in the shift from 5th century burials close to homes, where the dead mingled with the living, to the privileged spaces for bishops behind the apse in churches such as San Giovanni Evangelista, San Francesco and Sant'Agata maggiore. From earliest times, grave goods had contained simple objects like combs, buckles, keys and pots. Animal knuckle bones and teeth, and nails sometimes fixed in the ribs of the dead or holding the right heel of a skeleton to the ground – to prevent his return – may have had an amuletic value. In addition, small coins brought by pilgrims are found as offerings to the saints. She concludes that ritual elements gradually declined in favour of objects associated with the deceased – personal equipment, clothing, tools, bone pins, combs, needles and boxes and mirror handles.

Jewelry such as pendants, gold bracelets, engraved gems, amber rings, coral objects and necklaces made of beads put around the necks of children are often combined with coins, usually old Roman coins of very low value, placed on the body. Only rarely are 6th and 7th century coins found: a Justinianic coin in a tomb in the north portico of Santa Croce and one of Herakleios or Constans II inside a sarcophagus in the portico of Sant'Agata maggiore. A similar association of jewelers and coiners is clear in Prigent's reexamination of the famous jeweled earrings of Senise in the Museum of Naples. The reverse die of a solidus of Constans II marks the earring, indicating an exclusive connection with Ravenna and the involvement of goldsmiths in the production of coinage. This conclusive proof of the activity of a

local jewelry workshop in Ravenna brings together workers in precious metals and jewels.

Prigent's valuable analysis of the activity of the two mints of Ravenna also reveals how the exarchate retained its contacts with the Constantinople mint while adjusting to local needs. He traces three stages of the production of petty cash for immediate use: *dekanummia* to the end of the 6th century, then the half follis becomes the main coinage, and from the first reign of Justinian II (685–95) only *folleis* were struck at Ravenna. The preponderance of half-folleis found in excavations suggests its particular role, which was to “allow smooth exchange between the Eastern and Italian coins of different metrologies AND to maintain the same value of the *solidus* in pounds of bronze in both regions of the Empire”.

A similar light on the importance of the capital in setting artistic trends in Ravenna is analysed in Isabella Baldini's account of building materials. She draws attention to the first documented direct imports from Constantinople: 24 impost blocks ordered by Galla Placidia for her church of San Giovanni Evangelista, followed by a complete set of Proconnesian marble bases, columns, capitals and impost blocks used in the later 5th century construction of the Apostoleion (today the church of San Francesco), and several sarcophagi. By the time of Theoderic, a skilled sculptor, Daniel, was put in charge of the carving and sale of sarcophagi and requests were sent to Rome for *marmorarii*, experts in the alignment of marble panels to reveal their differently coloured mirror images, later used to such effect in San Vitale. The Gothic king was also determined to have the very best marble furnishings for his palace church, now Sant'Apollinare Nuovo, as witnessed in the Constantinopolitan origin of the ambo and all major elements of the construction. This close relationship with the eastern capital becomes even more pronounced after Maximianus was appointed archbishop of Ravenna by Justinian in 546. In fascinating details, Baldini traces the import of 188 tons of marble for the construction of San Vitale, which would have required four shiploads. Since the voyage from East to West during the sailing period of the summer months usually took nine to ten weeks, the process of commissioning building material from Proconnesos was a very long one that depended on expensive forward planning. In a contrary motion, later western emperors recognized the wealth of material in Ravenna and organised the export of *spolia*, such as an exquisite purple panel, out of the city and over the Alps to decorate their own palaces.

In contrast to the Constantinopolitan stimulus to the use of most expensive marble features, Enrico Cirelli draws attention to the importance of local skills and building materials in the construction of domes: the *tubuli*, cylindrical tubes, essential for dome and vault construction are a clear indication of local expertise.² His detailed tabulation of brick production illuminates many features of Ravenna's very

² Recently confirmed by Johnson 2018, 136, 159–60.

particular building activity and the determination of patrons such as archbishop Maximianus to have only the best materials. This very significant ecclesiastical leader also commissioned bricks identified by his name to be used in the construction of barracks for the First Numerus.³ Cirelli's contribution is a model of detailed archaeological investigation that reveals the production at specific kilns of ceramic tiles and cylindrical tubes, which may be found on buildings as far away as Naples. Ravenna's place in the late antique economy of Italy is brought into sharper perspective.

Finally, Deborah Deliyannis, whose edition and translation of the *Book of the Pontiffs of the church of Ravenna* is cited throughout the volume, contributes a splendid chapter on scribes and carvers of inscriptions that solicited a response from viewers, readers and hearers. As many of the witnesses to papyrus records kept in the municipal archive sign by making a cross, it's clear that the illiterate participated in "the social sphere of writing", approving a text they had heard read aloud. If only 20% of the population could read and write, as Guglielmo Cavallo pointed out in his masterly survey of 1992, the remaining 80% were dependent on the aural transmission of evidence in order to arrange their legal records. Both secular and ecclesiastical documents were drawn up and agreed in this way. Deliyannis lists the books that were known to be available in Ravenna, a great mixture of liturgical, medical, geographical and hagiographical texts, which made the city a centre for education, as Venantius Fortunatus records. The marginal notes in five different hands that accompany a copy of the works of Saint Ambrose confirm the use and discussion of such texts, while the composition of the *Cosmographia* illustrates a surprisingly wide range of texts available to this anonymous scholar.

Inevitably there are gaps in such an endeavour, but this volume demonstrates in manifold ways the brilliant results that can be obtained from a successful combination of archaeological and textual resources within an overarching explanatory model. The working of material substances is a critical feature in the spiritual life of any city, for instance in the labour of embalmers and the weavers of shrouds. Analysis of the micro level can inform the macro study of Mediterranean-wide economic developments. By bringing together accounts of such a wide range of different artefacts, the authors have achieved a compelling new synthesis of Ravenna's contribution to the history of Italy and the Mediterranean world during a critical transitional period. Ravenna emerges from this volume as a more complex, creative and intellectually vibrant centre than most cities in Late Antiquity.

Bibliography

Johnson, Mark. J. 2018. *San Vitale in Ravenna and Octagonal Churches in Late Antiquity* Wiesbaden.

3 LPRa, 77.

Index

- Abundantius, landowner 170
Achilles 50, 51
Acquedotti, Vitale 99
Adeodatus, *primicerius* 67
Adriatic 24, 125, 236, 261, 264, 282, 284, 304–305, 311
Aegean 6, 24, 74, 261; 264, 284 (islands), 320
Africa 16, 22, 24, 71, 120, 236, 264, 268, 282, 295, 302
Agapitus, *praefectus* 93
Agnellus, Andreas 63–64, 69, 74, 101–102, 103, 178, 196–199, 202, 204–206, 295, 317–318
Agnellus, bishop 64, 96, 100, 205–206
Agnellus, *iatrosofista* 200–201
Agnuli 264
Agrigento 297
Aistulf, Lombard king 315
Alaric, Visigothic king 50
Albania 262, 264
Aldrans (hoard) 296
Alemanni 154, 157
Alesia (hoard) 296
Alexandria 18, 61, 66, 73, 122
Alcinous 51
Alps 296, 322
Amalasuntha, Theoderic's daughter 94, 135
Amalfi 25, 315
Ambrose, bishop and saint 154, 202, 222, 323
Amorion 15, 17
Anastasia gate (Ravenna) 104
Anastasius, *consul* 117 (diptych)
Anatolia *see* Asia Minor
Ancona 283
Anonymus Ravennatis 200–201
Anonymus Valesianus 201
Anthemius, emperor 63
Antioch 25, 73
Antoninus Pius, emperor 158
Aphrodito 12, 15
Apolenaris, baker 319
Apollinaris, saint 101, 202
Apulia 73–74, 224, 262
Aquilaia 60, 67, 142, 154, 172, 261–262
Aqui Terme, necropolis 232
Arabia 120, fn 30
Arabs 12, 15, 17, 18
Arcadius, emperor 121, 168, 296
Archiepiscopal Museum (Ravenna) 97, 130, 137, 173
Areobindus, *consul* 117
Arian baptistery (Ravenna) 67, 69
Aristotle 40
Asia Minor 16, 24, 142, 266, 313
Askelon 262
Athalaric, Ostrogoth king 135, 172, 305
Athanarid geographer 200
Athens 19, 25
Augustus, emperor 60
Ausonius, writer 207
Avellino 224
Avitus, emperor 60, 63

Bacauda, *argentarius* 103, 107
Baduarius, general 304
Baduela, Ostrogoth king 305
Bagnacavallo 166, 185
Balkans 13, 23, 73
Barbatus, *rector* 319
Basilica Apostolorum *see* San Francesco
Basilica Herculis (Ravenna) 93
Basilica Hilariana (Rome) 168
Basilica Petriana (Classe) 177
Belisarius 68
Benevento 295
Berlin 141–142
Beronicianus, landowner 168
Beycesultan 22
Black Sea 7, 13, 26, 74, 264
Boethius, senator and writer 136
Bologna 156–157, 277
Bonifacius, pope 168
Bonitus *officinator* 170
Brescia 119, fn. 23, 172
Bruttium 169
Bubano 277
Bulgaria 26
Butrint 18, 21, 261, 264
Byzacena 260

Caesarea, suburb of Ravenna 61, 63, 212, 246
Caesarea Maritima 264

- Calabria 64, 73, 169, 262
 Calegati, Lorenzo, writer 85
 Calogenitus 94
 Cà Lunga, necropolis 246
 Campanella, Tommaso 62
 Campania 64
 Capodistria 262
 Cappella Arcivescovile (Ravenna) 70
 Cassiodorus Senator 93, 107, 136, 189,
 200–201, 260
 Castel San Pietro 277, 278
 Castel Trosino, necropolis 232
 Catania 13, 64, 294, 305
 Carthage 14, 24, 239, 283, 302
 Cellini, Benvenuto 41, 47
 Cervia 273, 276, 280
 Cesena 277, 282
 Charlemagne, emperor 317
 Charon's obol 220–222, 231
 Chersonesos (Crimea) 14, 15, 21, 25
 Chios 71, 73
 Cilicia 12, 261, 320
 Cimitile 168
 Cividale del Friuli 25, 172, 262
 Classe 18 (port), 61, 63, 71–74, 116, 119, 158,
 166, 173, 211–212, 216, 220 (necropolis),
 222, 227, 229 fn. 86, 232–234, 236, 238,
 245, 261, 260, 264, 266, 268–269,
 271–272, 283, 311, 320
 Claterna 157
 Comacchio 25, 74, 76, 227, 233, 273, 276–277,
 280–282, 284, 301
 Concordia 262
 Constantinople 11, 12, 15, 17, 24, 61–62, 66,
 73, 75, 83, 87–88, 91, 103–104, 107, 118,
 158, 170, 174, 260, 268, 283, 302, 307,
 312–313, 317, 320
 Constans II, emperor 13, 15, 64, 222, 293,
 299–301, fn. 46, 306–307, 321
 Constantine IV, emperor 64, 301 fn. 45–46
 Constantine V, emperor 306
 Constantius II, emperor 73, 217
 Constantius III, emperor 126, 135
 Corinth 15, 25, 264
 Cornwall 24
 Corsica 224
 Crete 21
 Crimea 12, 21
 Croatia 262, 264
 Crypta Balbi (Rome) 14, 19, 229 fn. 86, 238,
 271, 273
 Cyprus 9, 16–17, 24, 261, 320
 Cyrenaica 266
 Cyril of Alexandria, patriarch 121
 Dalmatia 158
 Damianus bishop 199, 206
 Daniel, *marmorarius* 92, 322
 Darsena (Ravenna), necropolis 218
 Demetrius, saint 84
 Dhiorius, kiln 17
 Dionysios, Greek god 46
 Dioscorides, physician 200
Domus of Ravenna 105–106, 154–156, 214,
 226, 246
 Dougga (Tunisia) 184
 Droctulf, military chief 206
 Durres 261
Ecclesia Gothorum (Ravenna), church 67
 Ecclesius, bishop 96, 168, 198
 Edict of Diocletian 320
 Egypt 2, 12, 15, 17, 18, 37, 38, 71, 266, 317
 Erelieva 68, fn. 68
 Emilia Romagna 64, 76, 156–157,
 276, 311
 England 19, 184
 Ennodius 199
 Ephesus 25, 261
 Epirus 59
 Episcopal baths, Ravenna 154
 Ethiopia 120
 Etna, mount 21
 Eugene II, pope 103
 Eugenius, *palatinus* 201 fn. 30
 Eulogius, bishop 14
 Eutichius, exach 98
 Eusebius of Caesarea 47
 Exarchate of Italy 311, 313
 Exuperantius, bishop 64, 206 fn. 48
 Faenza 60, 76, 93, 276
 Faragola (Apulia) 19
 Farfa, monastery 172
 Faventia *see* Faenza
 Felix, bishop 64, 200, 202
 Felix IV, pope 198
 Ferrara 76

- Fertile Crescent 2
 Fidenza 156
 Flavianus, bishop 184
 Flavius Aetius 168
 Flavius Justus Catervius 129
 (sarcophagus)
 Flumisello, stream 61
 Forlì 76, 233
 Forum Corneli (Imola) 157
 France 23, 184
 Franks 215, 296
 Friedrich Wilhelm IV, king 69
Fundus Armentarius 166
- Gabès 184
 Gaeta 315
 Galla Placidia, empress 87, 122, 126, 127, 132,
 135, 166, 322
 Gaudentius, *vicarius Africae* 168
 Gaul 125, 296–297
 Gaza 262
 George, Neapolitan *naukleros* 14
 George, Ravennate 199
 Goethe, Johann Wolfgang 34
 Gortyn 16, 97
 Goths 141
 Grado 67
 Greece 9, 71, 264
 Greeks 141
 Gregorius, *dux* 76
 Gregory I, pope 14, 202, 302
 Gregory of Tours 49, 202
 Gudahals, *vir inlustris* 70
 Gundihild 70
- Hadrian, emperor 158
 Halberstadt diptych 135
 Heldebold geographer 200
 Hephaestus, Greek god 47, 50–52
 Heraclius, emperor 222, 296 fn. 21, 297, 300,
 303, 306–307, 321
 Histonium 93
 Homer 50
 Honorius, emperor 59–62, 65, 126, 296 fn. 21
 Hucpaldus, *comes* 76
 Hvar, island 178
- Ibligo-Invillino, necropolis 227, 262
 Ilduin, abbot 102
- Illyricum 60
 Imola 277, 282
 Imperial palace (Ravenna) 177
 India 120
 Ingelrada *comitissa* 76
 Isaac, exarch 129, 318
 Ischia, island 168
 Isola delle Correnti (Calabria) 104
 Istria 2, 64, 73, 107, 184, 224, 317
 Italy 23, 264, 271, 273, 283, 295–296,
 304, 306
- Jews 141
 Johanici(u)s, Agnellus' ancestor 202
 John V, bishop 206–207
 John VI, bishop 99
 John VII, bishop 76
 John *forensis* 197
 John I, pope 170
 John II, pope 170
 John VII, pope 164, 172
 John the Deacon, chronicler 137
 John Romanus, bishop 101
 Jordan 184
 Julian, *argentarius* 66, 72, 96, 103, 105, 107,
 168, 318
 Julius Nepos, emperor 63
 Justin I, emperor 296 fn. 21
 Justin II, emperor 295, 304
 Justin, martyr 46
 Justinian, emperor 73, 138, 168, 295, 296 fn.
 21, 304, 306, 311, 319, 322
 Justinian II, emperor 322
 Justus *officinator* 170
 Jutungi 154, 157
 Juvenus *magister teularius* 172
- Katapoliani (Paros), church 97
 Khirbet al-Mafjar 184
 Koper *see* Capodistria
 Korcula (Croatia), island 283
 Kos, island 21
 Krk, island 283
- La Marsa (Tunisia) 184
 Labraunda (Turkey) 18
 Lamisa (Ravenna), stream 61
 Landarit 70
 Laurentius *officinator* 170

- Lauricius, *cubicularius* 65, and fn. 41
 Lawrence, bishop 104
 Lendarit 70
 Leo, emperor 118, 296
 Leontius, emperor 306 fn. 80
 Liberius II, bishop 166
 Lombards 75, 157, 224–225, 313
 Longinus, prefect 319
 Lothair, emperor 102–103
 Louis the Pious, emperor 102
 Lucca 312
 Luni 227
- Maghreb 23
 Majorian, emperor 125
 Malezzappi, Gianfrancesco 69, fn. 65
 Marabina, necropolis 217, 220
 Marche 64, 76
 Marcianus, emperor 296 fn. 21
 Marcomir, geographer 200
 Marcus Aurelius, emperor 217
 Marinianus, bishop 202, 206
 Martinus, *dux* 76
 Marx, Karl 36
 Marzamemi, shipwreck 84, 104
 Maurice, emperor 295, 299, 304, 306
 Maurus, bishop 64, 100, 102, 200, 207
 Maximian *see* Maximianus
 Maximianus, bishop 66, 69, 96, 103–105, 107, 136–138, 140–141, 200, 202, 206, 319
 Maximianus' chair 115–116, 136, 137 fn. 92, 140
 Meander Valley, Turkey 21
 Mediterranean 7, 26, 236, 261, 266, 268, 284, 311, 321, 323
 Meizza, necropolis 225
 Meldola, aqueduct 61
 Melos (Greece), island 8, 20
 Merovingian kingdom 225
 Metellus *officinator* 170
 Mezzocorona 229 fn. 86
 Milan 50, 85, 118, 122, 125, 135, 154, 172, 172, 184, 222, 239
 Misenum (Italy) 16, 17
 Modena 157–158
 Modigliana 232
Monasterium Sancti Pullionis (Ravenna) 178
Moneta Aurea (Ravenna) 170
- Monte Iudica (hoard) 295
 Monza, cathedral 172
 Moravia 215
 Museo Arcivescovile *see* Archiepiscopal Museum (Ravenna) 97
 Museo Nazionale (Ravenna) 97
 Myrmidons 50
- Naples 14, 16, 17, 19, 21, 25, 62, 65, 170, 264, 271, 300, 315
 Neon, bishop 88, 122, 134
 Neonian, baptistry 167
 Neoptolemus 51
 Nessana (Palestine) 12
 Nile 120
 Nocera Umbra, necropolis 232, 242 fn. 143–144
 Nonnus of Panopolis 51, fn. 91
 Novara 135, 139
 Nubia 120, 264
Nundinae 283, 321
- Oderzo 225, 262
 Odovacar, king 65, fn. 41, 68
 Odysseus 51
 Olybrius, emperor 63
 Orestes, consul 135
 Oribasius, physician 200
 Orthodox baptistry (Ravenna) 63, 69, 122, 205
 Orto Granara 277
 Ostia 61
 Otranto 15–17, 21, 25
 Otto III, emperor 137
 Ovilio gate (Ravenna) 295
- Padenna (Ravenna), stream 61, 104
 Panel of the Privileges 98
 Palazzette, necropolis 220, 244
 Palestine 71, 73, 184
 Paphos 304
 Parma 156
 Paros, island 98
 Paschasius, bishop 14
 Paul the Deacon 202, 205
 Paul the Silentary 52
 Pavia 158, 168, 295
 Pentapolis 74–75, 276
 Pesaro 143, 264

- Pescara 264, 276
 Peter Chrysologus, bishop 200, 202
 Peter II Orseolo, doge 137
 Petriana, basilica 75
 Petronace, bishop 102
 Petronius Maximus, emperor 63
 Petrus II, bishop 70
 Phidias, Greek sculptor 136
Philosophiana (Sicily) 16
 Philostratus 49
 Phocas, emperor 296 fn. 21, 301–302
 Piacenza 156
Picenum 158
 Pierius, *comes largitionum* 65, fn. 41
 Pignatta, sarcophagus 87–88, 130
Platea maior (Ravenna) 104, 294
 Pliny the Elder 40, 47
 Pliska 15
 Po River 72, 74, 162, 281–282
 Po Valley 72–73, 76, 184, 276, 280
 Podere Minghetti, necropolis 244–246
 Ponte Nuovo, necropolis 218
 Poreč 67, 97
Portus Lachernus 74
 Procopius of Caesarea 52, 59–60
 Procopius of Gaza 51–52
 Prudentius, writer 207
 Pseudo-Macarius 43
 Pula (Croatia) 67, 137, 283

 Quintus Smyrnaeus 50, 51
 Qusayr 'Amra, Jordan 36

 Rabbula Gospels 45
 Racalmuto (hoard) 297, 299
 Ranilo, *sublimis femina* 70
 Ravenna 15, 17, 60–63, 76, 83, 85, 87, 120, 122, 125, 132, 135, 143, 153, 157, 162–165, 169, 173–174, 176, 185, 195–196, 226, 234, 238, 240, 243, 245, 261, 284, 294–295, 301, 304, 306, 311, 313–315, 317, 319–320
 Red Sea 120
 Reggio Calabria 25
 Reggio Emilia 156
 Reparatus, bishop 64
 Rieti 70
 Rimini 60, 74, 76, 154–156, 170, 239, 273, 276–277, 280, 282–284
 Roccamorfin (Campania) 21
 Rhodes 261, 320
 Romagna 64, 73, 76, 238, 261, 276, 280
 Romans d'Isonzo, necropolis 233
 Romanus the Melode 48
 Rome 12, 15, 16, 17, 21, 25, 59, 61–62, 65–66, 75, 118, 136, 153 (St. John Lateran, St. Peter in the Vatican), 154, 165, 168–169, 171, 205, 221, 226, 232, 238–239, 271, 294–295, 303–304, 312
 Romea Vecchia, road 240, 245
 Rossi, Girolamo, historian 202
 Rotulus of Ravenna 200
 Rotunda of St. George, Thessaloniki 126
 Rufus, physician 200
 Russi 276–277
 Ruvo di Puglia 20

 Sabinus, bishop 164, 170
 Saint Andrew (Constantinople), church 103
 Saint Barbatianus, sarcophagus 129
 Saint Bartholomew (Ravenna), monastery 317
 Saint John (Canosa), church 170
 Saint Lawrence (Milan), church 184
 Saint Martin *in Barisano* (Rimini), church 170
 Saint Médard, abbey 103
 Saint Michael *in Acervoli* (Sant'Arcangelo) church 170, 184
 Saint Pancratius, church 170
 Saint Rinaldus, sarcophagus 127–128
 Saint Simplicianus (Milan) 184
 Saint Stephen (Constantinople), church 103
 Saint Tecla (Milan) 184
 Saints Peter and Paul *see* San Francesco
 Saints Quiricus et Julitta, reliquary 130
 Salamina, Cyprus 15
 Samos 71, 73, 272
 San Francesco (Ravenna), church 67, 85, fn. 7, 88, 107, 214, 218, 321–322
 San Lorenzo in Caesarea, church 65, 67, 86, 107
 San Lorenzo in Pallacinis (Rome), monastery 14
 San Giorgio (Argenta), church 167
 San Giorgio (Ravenna), church 68
 San Giovanni Battista (Ravenna), church 104–105, 131
 San Giovanni Evangelista (Ravenna), church 62, 67, 87, 89, 107, 167, 212, 218, 294, 321–322

- San Marco (Venice) 98
 San Martino in Ciel d'Oro *see* Sant'Apollinare Nuovo
 San Michele *in Africisco* (Ravenna), church 66–67, 69–70, 103, 153, 168–169, 185
 San Pietro *in Sylvis* (Bagnacavallo), church 166
 San Salvatore *see* Sant'Apollinare Nuovo
 San Sergio (Classe), church 68
 San Severo (Classe), church and monastery 75, 101–102, 158, 172, 174, 206, 211–212, 216, 219, 223, 238, 242–247
 San Vincenzo al Volturno, monastery 15
 San Vitale (Ravenna), church 38, 66–67, 69, 85, fn. 7, 96, 103, 127, 129, 132, 138, 153–154, 164, 185, 196, 318, 322
 San Vittore gate (Ravenna) 104
 San Vittore in Ciel d'Oro (Milan) 126, 184
 San Zenone (Caesarea), church 68
 Sant'Agata (Ravenna), church 67, 170, 177, 214, 222, 226, 321
 Sant'Agnese (Ravenna), church 214
 Sant'Anastasia (Ravenna), church 68
 Sant'Andrea Maggiore (Ravenna), church 137
 Sant'Antonino di Perti 294 fn. 8
 Sant'Apollinare in Classe (Ravenna), church 66–67, 85, fn. 7, 93, 97, 100–101, 103–104, 127–128, 134, 153, 165, 168, 172, 177, 185, 196, 206, 212, 222, 244, 319
 Sant'Apollinare Nuovo (Ravenna), church 39, 67–69, 85, fn. 7, 95, 104–105, 131–132, 322
 Sant'Arcangelo of Romagna 170, 260, 270, 277, 283, 320
 Sant'Eufemia (Constantinople), church 98
 Sant'Eufemia (Grado), church 68
 Sant'Eusebio (Ravenna), church 67–68, 132
 Santa Croce (Ravenna), church 62, 67, 154, 166, 177, 214, 222, 226, 321
 Santa Giustina in Capite Porticus (Ravenna), church 246
 Santa Maria Antiqua (Rome), church 171
 Santa Maria delle Grazie (Grado), church 68
 Santa Maria foris Portas (Castelseprio), church 171
 Santa Maria in Pado Vetere, necropolis 233
 Santa Maria Maggiore (Ravenna), church 67
 Santa Sofia (Forlì) 233
 Santissimi Giovanni e Paolo (Ravenna), church 67
 Santissimi Filippo e Giacomo (Ravenna), church 170
 Santo Spirito (Ravenna), church 67, 85, fn. 7, 90–91
 Santo Stefano *in marmorata* (Ravenna) 104
 Santo Stefano Maggiore (Ravenna), church 67
 Santo Stefano Rotondo (Rome), church 184
 Sardinia 168, 224
 Sardis 19, 71, 261, 266–267
 Sarsina 155–156
 Schiller, Friedrich 34
 Sea of Marmara 16, 83, 117, 125, 317
 Sebenico (Šibenik) 283
 Senise 293, 300–301, 321
 Sergius, bishop 74
 Sergius, *minister* 206
 Severus, bishop and saint 166, 222
 Severus Alexander, emperor 158, 172
 Shield of Achilles 33, 35, 49, 52
 Sicily 2, 13, 15, 21, 23, 63–64, 73–74, 178, 282–283, 294 fn. 6, 300, 317, 319
 Sidonius Apollinaris 61
 Sixtus III, pope 205
 Slavs 23
 Spada, Virgilio 99
 Spain 12, 24, 184, 266
 Spetses, island 15
 Supersano 8, 9, 22
 Susanna, wife of Isaac 318
 Sutton Hoo, necropolis 226
 Symeon the Younger, saint 36
 Symmachus, pope 170
 Syracuse 13, 15, 17, 25
 Syria 18, 71–73, 184
 Syrians 141
 Taranto 25
 Terno d'Isola 172
 Treviolo 172
 Thasos, island 83
 Theodahad, king 94
 Theoderic 68, 92, 93, 107, 125, 127, 136, 164–165, 169–170, 185, 201, 317
 Theoderic's mausoleum 74, 91, 218

- Theoderic's palace, Ravenna 67, 93, 105–106
- Theodoros of Sykeon, saint 46
- Theodorus bishop 199, 205 fn. 45
- Theodorus, exarch 98
- Theodosius I, emperor 60, 68, 121
- Theodosius II, emperor 121, 296 fn. 21
- Thessaloniki 18, 84
- Tiberius II, emperor 296 fn. 21, 304
- Tiberius III, emperor 301
- Ticinum *see* Pavia
- Timgad, Africa 65
- Toledo, Spain 158
- Tolentino 129
- Torcello 19, 262
- Tours 205
- Trajan, emperor 61
- Trier 118
- Trieste 67, 264
- Tunisia 73, 83, 260–261, 264, 269, 273
- Turkey 9, 261, 273
- Tuscia 74
- Tyrrhenian Sea 178
- Ublatella, Dominicus, bishop 99–100
- Ukraine 23
- Umbria 64
- Ursiana, church (Ravenna) 63, 67, 85, 127–129, 134, 166, 177
- Valentinian II, emperor 121
- Valentinian III, emperor 62, 200, 202, 296 fn. 21
- Vasche dello Zuccherificio, necropolis 220, 245
- Vecchiazano 276–277
- Veleia 156
- Venantius Fortunatus 199, 205, 323
- Veneto 64, 224
- Venice 74, 76, 271, 315
- Vercelli 184
- Verona 154
- Vespasian, emperor 158
- Via Popilia 60
- Via dei Poggi (Ravenna), necropolis 245
- Vibo Valentia 169
- Vicenne, necropolis 300 fn. 43
- Vico Equense 168
- Victor, bishop 64, 98 fn. 45, 168
- Vigna Barberini (Rome), necropolis 232
- Villa Clelia (Imola) 172, 227, 276
- Visigoths 296
- Voghenza 233
- Wiliarit, spodeus 203
- Wililiwa 70
- Yassi Ada 14
- Zara (Zadar) 283
- Zeugitana 260

